### CLIL Module Plan

| Author(s)     | MADDALENA Z               | MADDALENA ZUECH   |    |       |          |     |        |                        |  |
|---------------|---------------------------|-------------------|----|-------|----------|-----|--------|------------------------|--|
| School        | Centromoda Ca             | entromoda Canossa |    |       |          |     |        |                        |  |
| School Grade  | O Primary                 | O Primary O       |    |       | O Middle |     |        | <ul><li>High</li></ul> |  |
| School Year   | <b>•</b> 1                | 0 2               | 03 | O 3   |          |     |        | 05                     |  |
| Subject       | Matematica                | Matematica        |    | Topic |          | ALG | LGEBRA |                        |  |
| CLIL Language | <ul><li>English</li></ul> | <b>●</b> English  |    |       | sch      |     |        |                        |  |

### Personal and social-cultural preconditions of all people involved

Student groups and classes in both educational institutions are rather heterogeneous as regards linguistic competences, both in their mother tongue and in the English and German language. Levels vary from class to class and we can generally say that in both schools involved they go from A1-2 (mainly in the first year) to B1 (in the second and third years) or even above (B2-C1) in the fifth year. In previous years all groups involved have shown interest in CLIL modules, positively responding to the activities proposed, showing appreciation for a more active way of teaching and learning. In terms of commitment to learning and motivation they are very different and slightly less motivated than technical or grammar school students, because their main goal is to get trained and find a job. The students' technical abilities and skills develop over the 4-5 years of study and they all get on-the-job training in the 3rd and 4th year. Some of them complete their internships abroad, mainly in the UK but also in Germany and Austria. Our educational institutions are both vocational schools, that is, they are mainly oriented to training students to become responsible professionals in their specific field of expertise. In the last few years, though, the curriculum has changed to cover more academic subjects like History, Maths, History of Art, English and German and is now offering the opportunity to complete the course of study with a final 5th year, that also prepares students to go on to further or academic education. CMC: students come from all over the Region, as this is the only school for fashion design in Trentino, some spend an hour getting home. This doesn't leave them much time for homework or study. There are many students with migratory backgrounds at CMC but the Institution is very inclusive and supports students with special educational needs in many different ways throughout the various activities in class and outside. The teachers involved in the CLIL modules

| Students' prior |
|-----------------|
| knowledge,      |
| skills,         |
| competencies    |
|                 |

| Subject |  |
|---------|--|
|---------|--|

Students need to know the four operations and exponentiation in natural, integer, rational and real number sets.

#### Language

The prior knowledge of the students covers what has been learned in the primary and middle school. We can say for the first years it is very basic with a few exceptions. They need to have at least good A1 level.

#### **Timetable fit**

Module

Length 20

### Description of teaching and learning strategies

Methodological approaches: Task-Based Learning, Project-Based Learning, Cooperative Learning. Choices and strategies to promote interaction and communication during the lesson involving students: pair work, group work, plenary share. During the whole length of the module the teacher provides personal support to each student who needs it, and the support becomes even stronger when there are moments of co-teaching. Learning activities connected to expected learning outcomes: classwork and homework are both oriented towards the progressive growth of the students' personal skills in order to achieve the expected learning outcomes. Content and language input: the focus of the input is on authentic materials. Every activity is designed so that it can meet both a lower and a higher level of competence. The goal is to avoid boredom of more proficient students and overchallenging tasks for special needs kids. ICT learning tools and media: video, slideshows. Materials to support content/procedure/paedagogical/language scaffolding: the guiding ppt contains procedural scaffolding such as timing for each activity, clearly written instructions, so that special needs kids are guided throughout the process to prevent confusion through lack of information. Assessment and Evaluation: Rubrics with criteria for success have been discussed and developed by the team of teachers; they are then shared with the students at the beginning of the module in the launch session or in the session immediately after that. In terms of language use these are the common criteria: "rarely uses the language required, sometimes uses the language required, always uses the language required" During all the activities of each module we have used the same assessment and observation grids and assessment criteria as a team resource, so as to have conformity in the use of different tools, shared among all of us. (see attached files: Assessment grid; Peer Assesment; Observation Grid 1; Observation Grid 2)

### Overall Module Plan

Unit: 1

**MONOMIALS** 

Unit length: 8

Lesson 1

INTRODUCTION TO ALGEBRAIC EXPRESSIONS

Lesson 2

PARTS OF ALGEBRAIC EXPRESSIONS

Lesson 3

COEFFICIENT AND LIKE TERMS

Lesson 4

MONOMIALS AND DEGREE

Lesson 5

**ADDING MONOMIALS** 

Lesson 6

SUBTRACTING MONOMIAL

Lesson 7

**MULTIPLYING MONOMIALS** 

Lesson 8

CONSOLIDATING MONOMIALS

| Unit: 3  Unit: 3  FIRST GRID EQUATIONS  Unit length: 4  Lesson 2  NAMING POLYNOMIALS  Lesson 4  INTRODUCTION TO ADDING AND SUBTRACTING POLYNOMIALS  Lesson 5  ADDING AND SUBTRACTING POLYNOMIALS  Lesson 6  MULTIPLYING POLYNOMIALS  Lesson 7  SPECIAL BINOMIAL PRODUCTS  Lesson 8  CONSOLIDATING POLYNOMIALS  Unit: 3  FIRST GRID EQUATIONS  Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4  CONSOLIDATING EQUATIONS | POLYNOMIALS          | WHAT ARE POLYNOMIALS?                              |  |  |  |  |  |  |
|--|----------------------|--|--|--|--|--|--|--|
| Lesson 3 PARTS OF POLYNOMIALS  Lesson 4 INTRODUCTION TO ADDING AND SUBTRACTING POLYNOMIALS  Lesson 5 ADDING AND SUBTRACTING POLYNOMIALS  Lesson 6 MULTIPLYING POLYNOMIALS  Lesson 7 SPECIAL BINOMIAL PRODUCTS  Lesson 8 CONSOLIDATING POLYNOMIALS  Unit: 3 FIRST GRID EQUATIONS Unit length: 4  Lesson 1 INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3 SOLVING EQUATIONS Lesson 4   | Unit length: 8       | Lesson 2   |  |  |  |  |  |  |
| PARTS OF POLYNOMIALS  Lesson 4  INTRODUCTION TO ADDING AND SUBTRACTING POLYNOMIALS  Lesson 5  ADDING AND SUBTRACTING POLYNOMIALS  Lesson 6  MULTIPLYING POLYNOMIALS  Lesson 7  SPECIAL BINOMIAL PRODUCTS  Lesson 8  CONSOLIDATING POLYNOMIALS  Unit: 3  FIRST GRID EQUATIONS  Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4  |                      | NAMING POLYNOMIALS                                 |  |  |  |  |  |  |
| Lesson 4 INTRODUCTION TO ADDING AND SUBTRACTING POLYNOMIALS  Lesson 5 ADDING AND SUBTRACTING POLYNOMIALS  Lesson 6 MULTIPLYING POLYNOMIALS  Lesson 7 SPECIAL BINOMIAL PRODUCTS  Lesson 8 CONSOLIDATING POLYNOMIALS  Unit: 3 FIRST GRID EQUATIONS Unit length: 4  Lesson 1 WHAT ARE EQUATIONS?  Lesson 2 INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3 SOLVING EQUATIONS Lesson 4  |                      | Lesson 3   |  |  |  |  |  |  |
| INTRODUCTION TO ADDING AND SUBTRACTING POLYNOMIALS  Lesson 5 ADDING AND SUBTRACTING POLYNOMIALS  Lesson 6 MULTIPLYING POLYNOMIALS  Lesson 7 SPECIAL BINOMIAL PRODUCTS  Lesson 8 CONSOLIDATING POLYNOMIALS  Unit: 3 FIRST GRID EQUATIONS Unit length: 4  Lesson 1 WHAT ARE EQUATIONS? Lesson 2 INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3 SOLVING EQUATIONS Lesson 4  |                      | PARTS OF POLYNOMIALS                               |  |  |  |  |  |  |
| Lesson 5  ADDING AND SUBTRACTING POLYNOMIALS  Lesson 6  MULTIPLYING POLYNOMIALS  Lesson 7  SPECIAL BINOMIAL PRODUCTS  Lesson 8  CONSOLIDATING POLYNOMIALS  Unit: 3  FIRST GRID EQUATIONS Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4   |                      | Lesson 4   |  |  |  |  |  |  |
| ADDING AND SUBTRACTING POLYNOMIALS  Lesson 6  MULTIPLYING POLYNOMIALS  Lesson 7  SPECIAL BINOMIAL PRODUCTS  Lesson 8  CONSOLIDATING POLYNOMIALS  Unit: 3  FIRST GRID EQUATIONS Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4   |                      | INTRODUCTION TO ADDING AND SUBTRACTING POLYNOMIALS |  |  |  |  |  |  |
| Lesson 6  MULTIPLYING POLYNOMIALS  Lesson 7  SPECIAL BINOMIAL PRODUCTS  Lesson 8  CONSOLIDATING POLYNOMIALS  Unit: 3  FIRST GRID EQUATIONS Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4   |                      | Lesson 5   |  |  |  |  |  |  |
| MULTIPLYING POLYNOMIALS  Lesson 7  SPECIAL BINOMIAL PRODUCTS  Lesson 8  CONSOLIDATING POLYNOMIALS  Unit: 3  FIRST GRID EQUATIONS Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4   |                      | ADDING AND SUBTRACTING POLYNOMIALS                 |  |  |  |  |  |  |
| Lesson 7  SPECIAL BINOMIAL PRODUCTS  Lesson 8  CONSOLIDATING POLYNOMIALS  Unit: 3  FIRST GRID EQUATIONS Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4  |                      | Lesson 6   |  |  |  |  |  |  |
| SPECIAL BINOMIAL PRODUCTS  Lesson 8  CONSOLIDATING POLYNOMIALS  Unit: 3  FIRST GRID EQUATIONS Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4  |                      | MULTIPLYING POLYNOMIALS                            |  |  |  |  |  |  |
| Lesson 8 CONSOLIDATING POLYNOMIALS  Unit: 3 FIRST GRID EQUATIONS Unit length: 4  Lesson 2 INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS Lesson 3 SOLVING EQUATIONS Lesson 4   |                      | Lesson 7   |  |  |  |  |  |  |
| Unit: 3 FIRST GRID EQUATIONS Unit length: 4  Lesson 1 WHAT ARE EQUATIONS? Lesson 2 INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS Lesson 3 SOLVING EQUATIONS Lesson 4  |                      | SPECIAL BINOMIAL PRODUCTS                          |  |  |  |  |  |  |
| Unit: 3  FIRST GRID EQUATIONS Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4  |                      | Lesson 8   |  |  |  |  |  |  |
| WHAT ARE EQUATIONS?  Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4   |                      | CONSOLIDATING POLYNOMIALS                          |  |  |  |  |  |  |
| WHAT ARE EQUATIONS?  Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4   |                      |  |  |  |  |  |  |  |
| Unit length: 4  Lesson 2  INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3  SOLVING EQUATIONS  Lesson 4  | Unit: 3              | Lesson 1   |  |  |  |  |  |  |
| Lesson 2 INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS  Lesson 3 SOLVING EQUATIONS  Lesson 4  | FIRST GRID EQUATIONS | WHAT ARE EQUATIONS?                                |  |  |  |  |  |  |
| Lesson 3 SOLVING EQUATIONS Lesson 4  | Unit length: 4       | Lesson 2   |  |  |  |  |  |  |
| SOLVING EQUATIONS  Lesson 4  |                      | INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS     |  |  |  |  |  |  |
| Lesson 4   |                      | Lesson 3   |  |  |  |  |  |  |
|  |                      | SOLVING EQUATIONS                                  |  |  |  |  |  |  |
| CONSOLIDATING EQUATIONS  |                      | Lesson 4   |  |  |  |  |  |  |
|  |                      | CONSOLIDATING EQUATIONS                            |  |  |  |  |  |  |

Lesson 1

Unit: 2

 Unit number
 1
 Lesson number
 1
 Title
 INTRODUCTION TO ALGEBRAIC EXPRESSIONS

| Activity | Timing | Learning<br>Outcomes             | <b>Activity Procedure</b> | Language  | Interaction  | Materials                      | Assessment   |
|----------|--------|----------------------------------|---------------------------|---|--|--------------------------------|--|
| 1        | 15     | ACTIVATING<br>PRIOR<br>KNOWLEDGE | BRAINSTORMING             | Key vocabulary VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT  Communicative structures CAN YOU TELL ME? WHAT IS? DO YOU KNOW? DOES THIS EXPRESSION CONTAIN? | ■ Whole class □ Group work □ Pair work □ Individual work | SLIDES<br>INTERACTIVE<br>BOARD | SUMMARY PROVIDED BY THE TEACHER. SEE ASSESSMENT AND OBSERVATION GRIDS. |

| 2 | 20 | GLOBAL<br>UNDERSTANDING<br>INTRODUCING<br>SPECIFIC<br>TERMINOLOGY | WATCH 4 SHORT VIDEOS | Key vocabulary VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM  Communicative structures LISTEN CAREFULLY WHAT IS? LOOK AT DOES THIS EXPRESSION CONTAIN? YES, IT DOES NO, IT DOESEN'T | □ Whole class □ Group work □ Pair work ■ Individual work | VIRTUAL NERD VIDEO: - WHAT IS A VARIABLE? link - WHAT IS A CONSTANT? link - WHAT ARE NUMERICAL AND ALGEBRAIC EXPRESSIONS? link - WHAT'S A TERM? link | SUMMARY PROVIDED BY THE TEACHER. SEE ASSESSMENT AND OBSERVATION GRIDS. |
|---|----|---|----------------------|---|--|--|--|
|---|----|---|----------------------|---|--|--|--|

| 3 | 20 | KNOWING A DEFINITION | STUDENTS IN PAIRS TRY TO REMEMBER PARTS OF THE ALGEBRAIC EXPRESSIONS AND THE DEFINITIONS THAT THEY HAVE LISTENED TO IN VIDEOS. THE TEACHER HELPS STUDENTS TO WRITE DEFINITIONS IN CORRECT ENGLISH. | Key vocabulary VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM | □ Whole class □ Group work ■ Pair work □ Individual work | PAPERS TO<br>WRITE THE<br>DEFINITIONS | TEACHER EVALUATES THE STUDENT DEFINITIONS. THE QUALITY OF THE INTERACTIONS. SEE OBSERVATION AND ASSESSMENT GRIDS. |
|---|----|----------------------|--|--|--|---------------------------------------|---|
|   |    |                      |  | Communicative<br>structures<br>A TERM IS A<br>VARIABLE IS A<br>CONSTANT IS   |  |                                       |   |

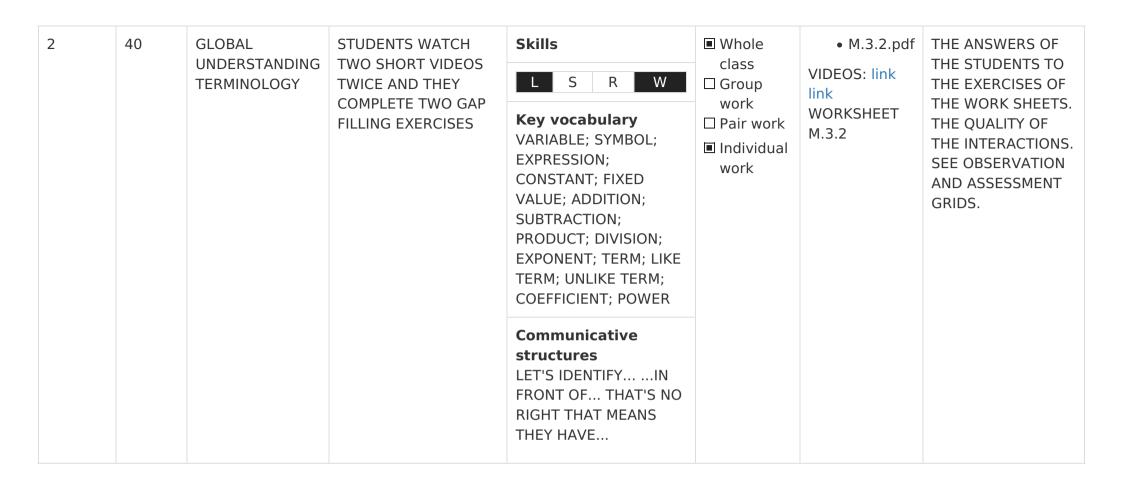
 Unit number
 1
 Lesson number
 2
 Title
 PARTS OF ALGEBRAIC EXPRESSIONS

| Activity | Timing | Learning<br>Outcomes                              | Activity<br>Procedure   | Language   | Interaction  | Materials   | Assessment  |
|----------|--------|---|---|--|--|---|---|
| 1        | 20     | IDENTIFY DIFFERENT PARTS OF ALGEBRAIC EXPRESSIONS | TEACHER SHOWS PARTS OF AN ALGEBRAIC EXPRESSION AND ASKS STUDENTS TO IDENTIFY THEM | Key vocabulary VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM  Communicative structures WHAT IS? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS THIS IS CAN YOU TELL ME DO YOU KNOW? | ■ Whole class □ Group work □ Pair work □ Individual work | LIST OF PARTS OF<br>ALGEBRAIC<br>EXPRESSION<br>WHITEBOARD | GROUP CLASS ASSESSMENT. THE QUALITY OF THE INTERACTIONS SEE OBSERVATION AND ASSESSMENT GRIDS. |

2 35 **DEFINE PARTS OF** STUDENTS WORK Skills ☐ Whole THE WORKSHEETS/CARDS class **INTERACTIONS** ALGEBRAIC IN PAIR TO DEFINE L S R EXPRESSION. THE PARTS OF AN W ☐ Group BETWEEN THE **GOAL OF THE** ALGEBRAIC work STUDENTS. **Key vocabulary ACTIVITY IS TO** EXPRESION. EACH ■ Pair work THE QUALITY VARIABLE; SYMBOL; FIGURE OUT THE STUDENT GETS A OF THE ☐ Individual **EXPRESSION:** CARD. ONE SIDE NAME OF THE INTERACTIONS. work CONSTANT; FIXED SEE OTHER PERSON'S HAS A PARTS OF VALUE; ADDITION; **EXPRESSION AS** ALGEBRAIC **OBSERVATION** SUBTRACTION; FAST AS POSSIBLE. **EXPRESSION** AND PRODUCT; DIVISION; TO EXCHANGE WRITEN ON IT IN **ASSESSMENT EXPONENT; TERM** INFORMATION MARKER. THE GRIDS. OTHER SIDE HAS (TRADE CARDS), Communicative AND FIND A NEW THE NAME OF THIS structures PARTNER TO GET PART WRITTEN IN WHAT IS...? ARE YOU MORE PRACTICE. PENCIL. STUDENTS SURE? YES, IT'S RIGHT! STAND UP AND NO, TRY AGAIN! LOOK PAIR UP. THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

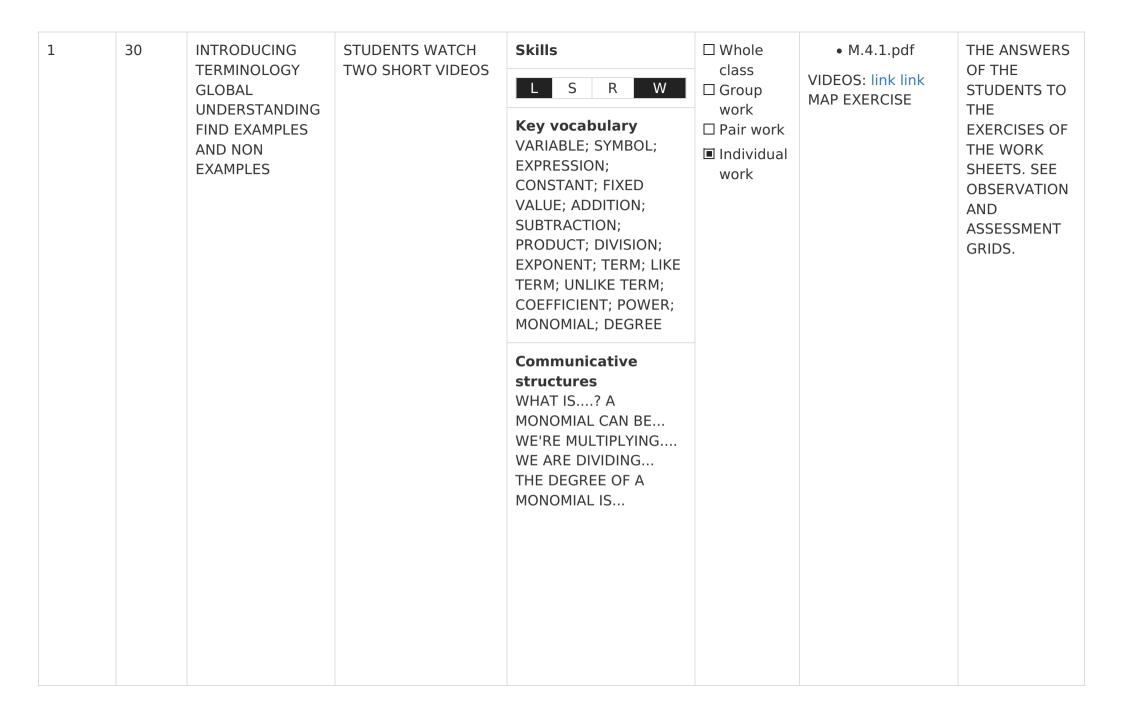
 Unit number
 1
 Lesson number
 3
 Title
 COEFFICIENT AND LIKE TERMS

| Activity | Timing | Learning<br>Outcomes                       | <b>Activity Procedure</b>                          | Language   | Interaction                    | Materials                         | Assessment   |
|----------|--------|--|--|--|--------------------------------|-----------------------------------|--|
| 1        | 15     | REMEMBER AND<br>CONSOLIDATE<br>TERMINOLOGY | BRAINSTORMING:<br>COMPLETE GAP<br>FILLING EXERCISE | Skills  L S R W  | □ Whole<br>class<br>□ Group    | • M.3.1.pdf<br>WORKSHEET<br>M 3 1 | THE ANSWERS OF<br>THE GROUPS TO<br>THE EXERCISES OF    |
|          | TER    |  |  | Key vocabulary VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM | work Pair work Individual work |                                   | THE WORK SHEETS. SEE OBSERVATION AND ASSESSMENT GRIDS. |
|          |        |  |  | Communicative<br>structures<br>DEFINITIONS: A TERM IS<br>A VARIABLE IS   |                                |                                   |  |



| Unit number | 1 | Lesson number | 4 | Title | MONOMIALS AND DEGREE |
|-------------|---|---------------|---|-------|----------------------|
|-------------|---|---------------|---|-------|----------------------|

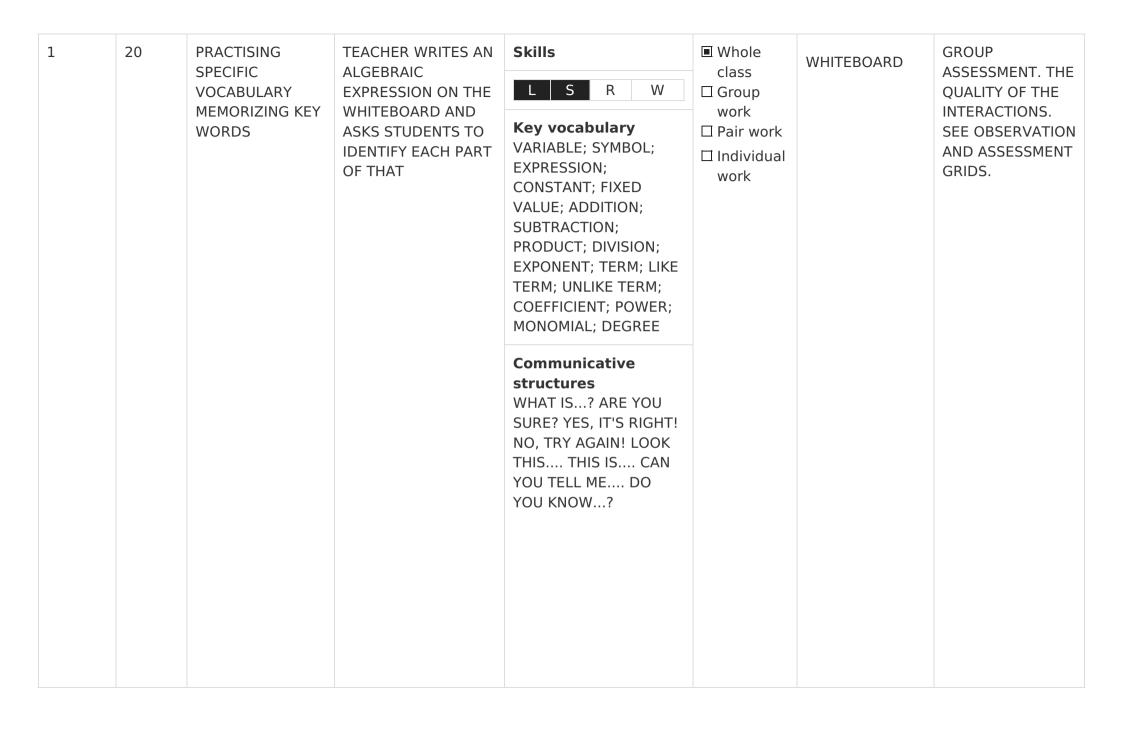
| Activity | Timing | Learning<br>Outcomes | <b>Activity Procedure</b> | Language | Interaction | Materials | Assessment |  |
|----------|--------|----------------------|---------------------------|----------|-------------|-----------|------------|--|
|          |        |                      |                           |          |             |           |            |  |



| 2 | 25 | 5 IDENTIFY MONOMIALS AND THEIR DEGREE | TEACHER SHOWS TERMS AND ASKS STUDENTSTO IDENTIFY THEM.            | Skills  L S R W  | ■ Whole class □ Group work | LISTS OF<br>TERMS/MONOMIALS<br>WHITEBOARD | THE QUALITY OF THE INTERACTIONS. SEE |
|---|----|---------------------------------------|---|--|----------------------------|---|--------------------------------------|
|   |    |                                       | TEACHER SHOWS MONOMIALS AND ASKS STUDENTS TO CALCULATE THE DEGREE | Key vocabulary VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE  Communicative structures WHAT IS? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS THIS IS CAN YOU TELL ME DO YOU KNOW? | Pair work Individual work  |   | OBSERVATION AND ASSESSMENT GRIDS.    |

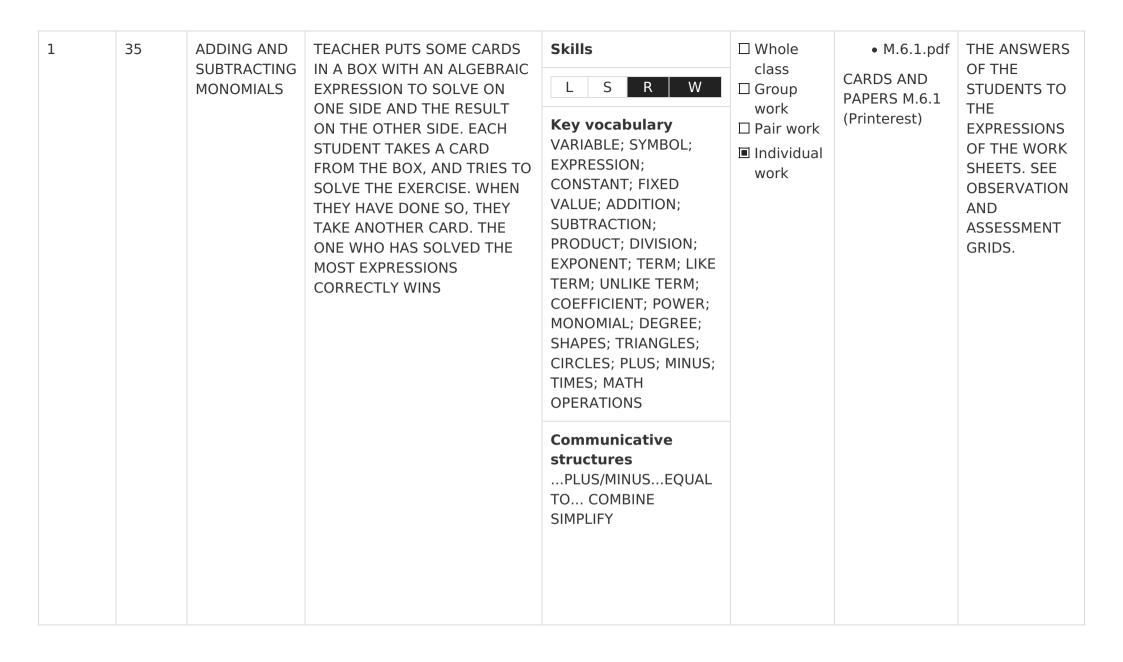
| Unit number 1 Lesson number | 5 | Title | ADDING MONOMIALS |
|-----------------------------|---|-------|------------------|
|-----------------------------|---|-------|------------------|

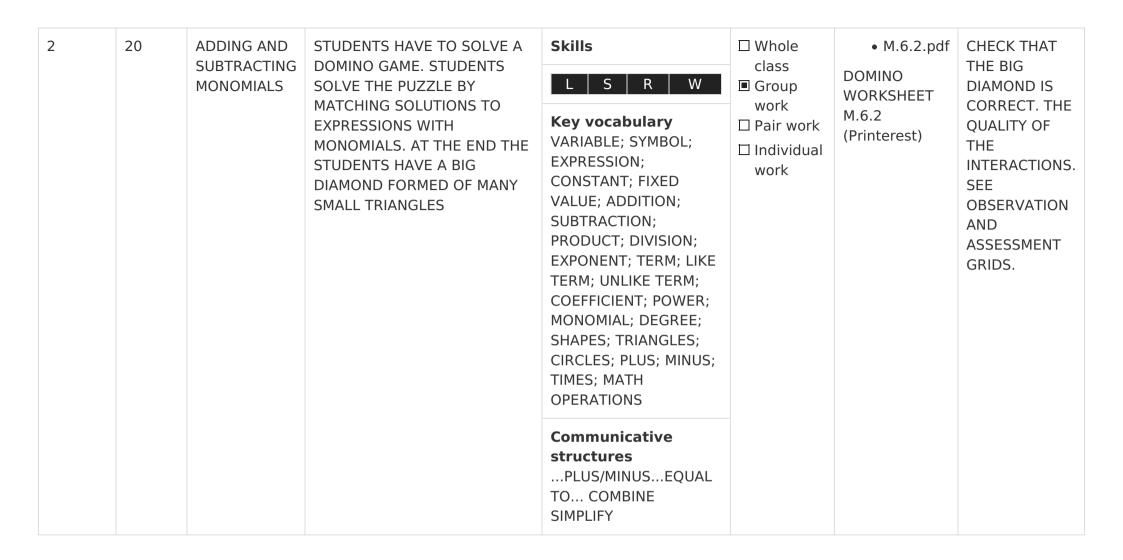
| Activity | Timing | Learning<br>Outcomes | <b>Activity Procedure</b> | Language | Interaction | Materials | Assessment |
|----------|--------|----------------------|---------------------------|----------|-------------|-----------|------------|
|          |        |                      |                           |          |             |           |            |



2 35 **ACTIVATING KEY** STUDENTS IN PAIRS **Skills** ☐ Whole • M.5.2.1.pdf THE ANSWERS OF **WORDS ADDING** TRY TO class • M.5.2.2.pdf THE PAIRS TO THE S R L W AND UNDERSTAND HOW ☐ Group M.5.2.3.pdf **EXERCISES ONTHE** SUBTRACTING TO ADD AND work WORK SHEETS. WORKSHEETS **Key vocabulary** MONOMIALS SUBTRACT ■ Pair work COMPARE AND M.5.2.1 M.5.2.2 VARIABLE; SYMBOL; **TRANSFORMING** MONOMIALS AND CONTRAST ☐ Individual (link) M.5.2.3 **EXPRESSION:** SYMBOLS IN THEN THEY DO SOME BETWEEN THE work (link) CONSTANT; FIXED SIMPLE EXERCISES MATH LANGUAGE PAIRS. DOUBLE VALUE; ADDITION; CHECK WITH SUBTRACTION; REALIA. THE PRODUCT; DIVISION; QUALITY OF THE EXPONENT; TERM; LIKE INTERACTIONS. TERM; UNLIKE TERM; **SEE OBSERVATION** COEFFICIENT: POWER: AND ASSESSMENT MONOMIAL; DEGREE; GRIDS. SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS** Communicative structures ...PLUS/MINUS...EQUAL TO... COMBINE SIMPLIFY

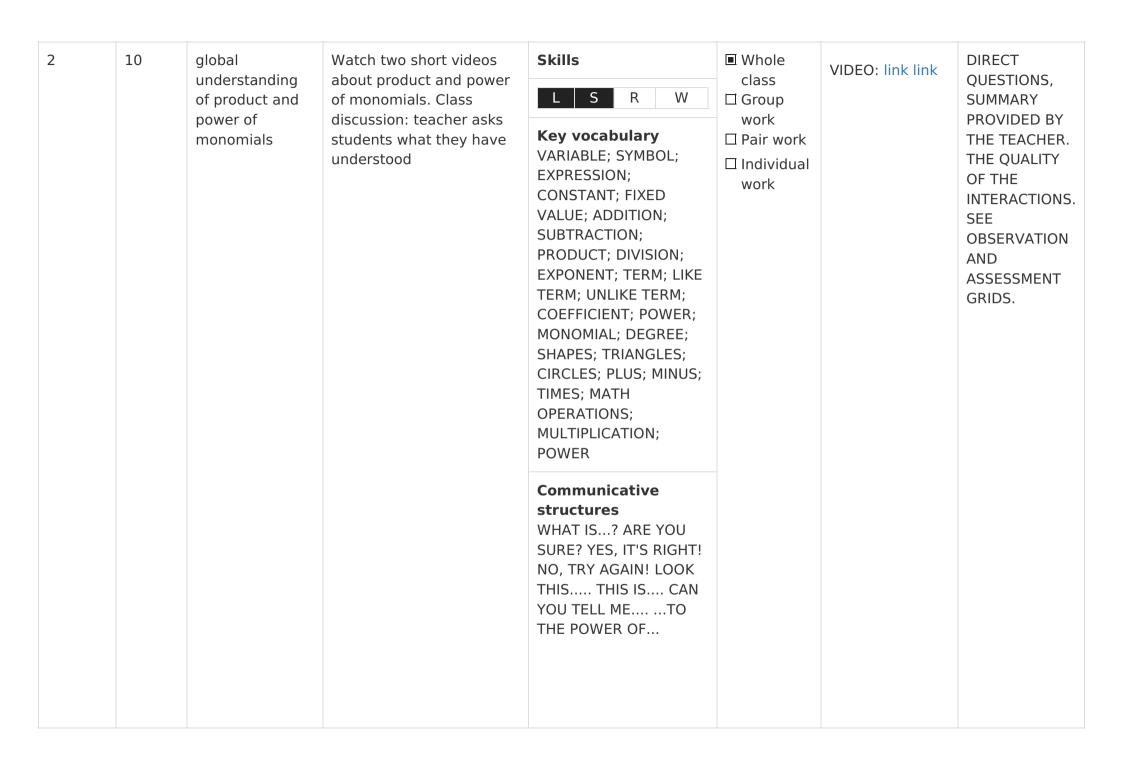
| Activity | Timing | Learning | Activity Procedure | Language | Interaction | Materials | Assessment |
|----------|--------|----------|--------------------|----------|-------------|-----------|------------|
|          |        | Outcomes |                    |          |             |           |            |



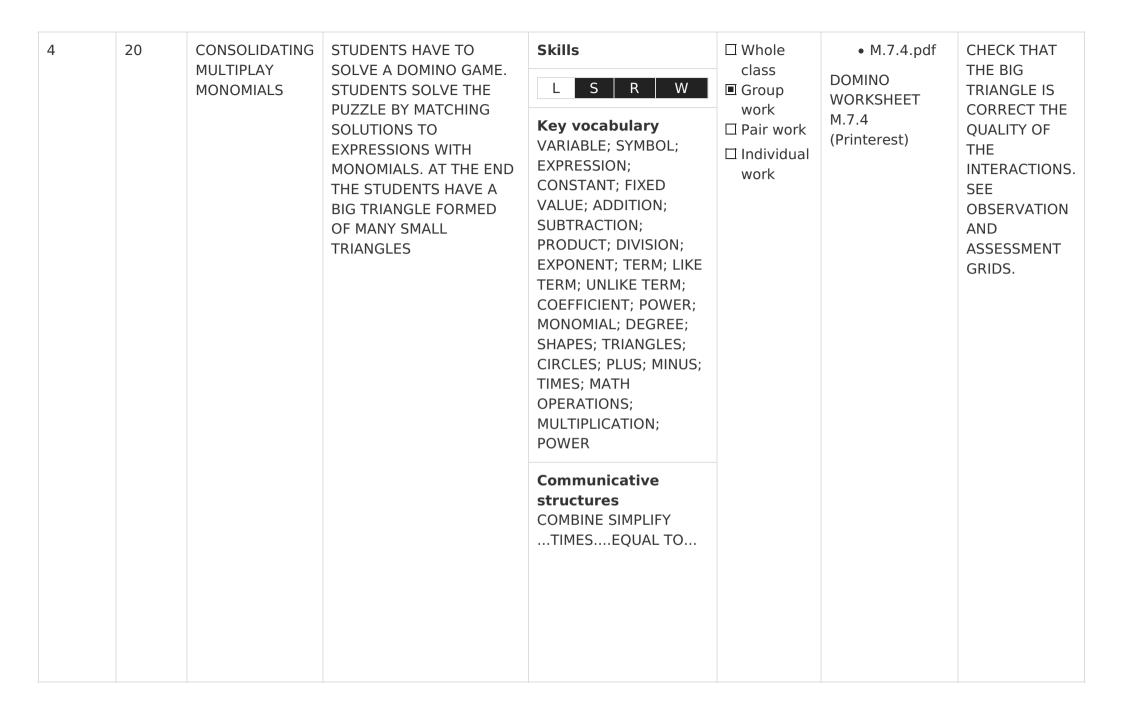


 Unit number
 1
 Lesson number
 7
 Title
 MULTIPLYING MONOMIALS

| Activity | Timing | Learning<br>Outcomes                           | <b>Activity Procedure</b>                     | Language   | Interaction  | Materials                      | Assessment  |
|----------|--------|--|---|--|--|--------------------------------|---|
| 1        | 15     | Practicing adding and subtraction of monomials | Complete the pyramid combining the like terms | Key vocabulary VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH OPERATIONS  Communicative structuresplusis equal to | □ Whole class □ Group work □ Pair work ■ Individual work | • M.7.1.pdf<br>worksheet M.7.1 | THE ANSWERS OF THE STUDENTS TO THE EXERCISES ON THE WORK SHEET. THE QUALITY OF THE INTERACTIONS SEE OBSERVATION AND ASSESSMENT GRIDS. |

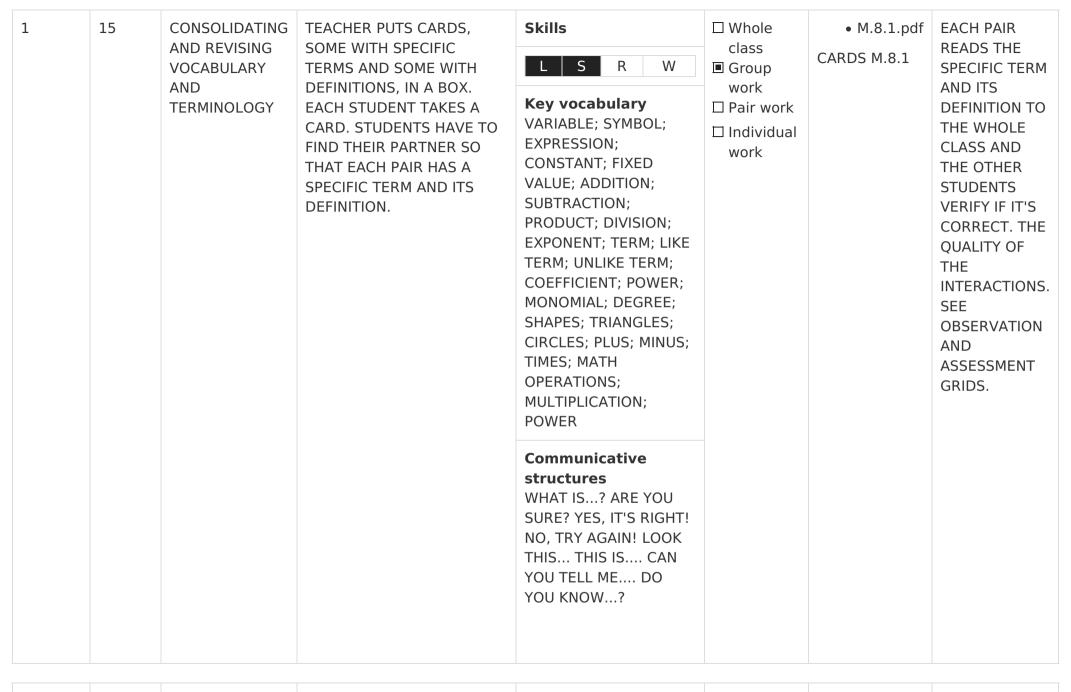


3 10 Skills ☐ Whole • M.7.3.1.pdf WRITING ACTIVATING KEY STUDENTS IN PAIRS TRY WORDS class • M.7.3.2.pdf EXERCISES. TO UNDERSTAND HOW TO S R W **MULTIPLY MULTIPLY MONOMIALS** ☐ Group COMPARE AND WORKSHETTS MONOMIALS AND THEN THEY DO SOME work CONTRAST M.7.3.1 (link) **Key vocabulary** SIMPLE EXERCISES ■ Pair work BETWEEN THE M.7.3.2 (link) VARIABLE: SYMBOL: PAIRS. THE ☐ Individual **EXPRESSION**; **ANSWERS OF** work CONSTANT; FIXED THE PAIRS TO VALUE; ADDITION; THE SUBTRACTION: **EXERCISES OF** PRODUCT; DIVISION; THE WORK EXPONENT; TERM; LIKE SHEETS, THE TERM: UNLIKE TERM: **QUALITY OF** COEFFICIENT; POWER; THE MONOMIAL; DEGREE; INTERACTIONS. SHAPES; TRIANGLES; SEE CIRCLES; PLUS; MINUS; **OBSERVATION** TIMES; MATH AND OPERATIONS; **ASSESSMENT** MULTIPLICATION; GRIDS. **POWER** Communicative structures WHAT IS ... ? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...? **COMBINE SIMPLIFY** 



| Unit number 1 Lesson number | 8 | Title | CONSOLIDATING MONOMIALS |
|-----------------------------|---|-------|-------------------------|
|-----------------------------|---|-------|-------------------------|

| Outcomes | Activity | Timing | Learning<br>Outcomes | <b>Activity Procedure</b> | Language | Interaction | Materials | Assessment |
|----------|----------|--------|----------------------|---------------------------|----------|-------------|-----------|------------|
|----------|----------|--------|----------------------|---------------------------|----------|-------------|-----------|------------|



2

CHECKING
ABILITY TO ADD
AND SUBTRACT
LIKE AND
UNLIKE TERMS

COMPLETE A TABLE. MATCH SOME SIMPLE OPERATIONS WITH THE CORRECT SOLUTIONS. L S R W

### **Key vocabulary**

VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH

# **Communicative structures**

**OPERATIONS**;

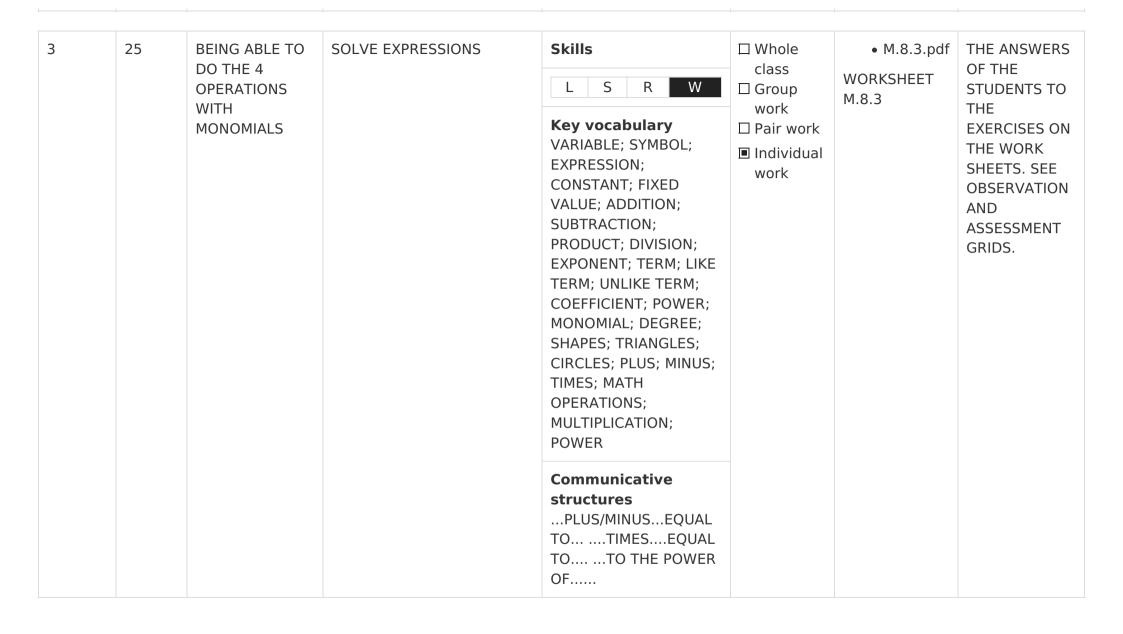
...PLUS/MINUS...EQUAL
TO... COMBINE
SIMPLIFY WHAT IS...?
ARE YOU SURE? YES,
IT'S RIGHT! NO, TRY
AGAIN! LOOK THIS THIS
IS.... CAN YOU TELL
ME.... DO YOU KNOW...?

☐ Whole class ☐ Group

- □ Group work
- Pair work
- ☐ Individual work

WORKSHEET M.8.2

TO THE
QUESTIONS
THE WORK
SHEETS. THE
QUALITY OF
THE
INTERACTIONS.
SEE
OBSERVATION
AND
ASSESSMENT
GRIDS.



Unit number 2 Lesson number 1 Title WHAT ARE POLYNOMIALS?

| Activity | Timing | Learning<br>Outcomes  | Activity Procedure                                     | Language        | Interaction  | Materials                                      | Assessment  |
|----------|--------|---|--|-----------------|--|--|---|
| 1        | 15     | GLOBAL<br>UNDERSTANDING<br>FIND EXAMPLES<br>AND NON<br>EXAMPLES | WATCH SHORT VIDEO ABOUT CHARACTERISTICS OF POLYNOMIALS | Skills  L S R W | ■ Whole class Group work Pair work Individual work | VIDEO (from<br>begin to 5:15<br>minutes): link | GROUP/CLASS ASSESSMENT. THE QUALITY OF THE INTERACTIONS SEE OBSERVATION AND ASSESSMENT GRIDS. |

### **Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION: CONSTANT: FIXED** VALUE; ADDITION; SUBTRACTION: PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; **DENOMINATOR:** RADICAL SIGN; Communicative structures WHAT IS ... ? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

2 20 CONSOLIDATING COMPLETE A MAP ABOUT **Skills** Whole • P.1.2.1.pdf | THE ANSWERS **VOCABULARY AND** THE DEFINITION OF OF THE class MAP S R **TERMINOLOGY** POLYNOMIAL, ITS W ☐ Group **GROUPS TO WORKSHEET IDENTIFY A** CHARACTERISTICS AND work THE POLYNOMIAL AND SOME EXAMPLES AND **EXERCISES ON** 

| ITS CHARACTERISTICS | NON-EXAMPLES. STUDENTS WITH THE TEACHER DECIDE WHAT TO WRITE IN THE "DEFINITION" BOX AND THE "CHARACTERISTICS" BOX. STUDENTS WRITE THEIR OWN EXAMPLE AND NON-EXAMPLE ON THEIR MAP. | Key vocabulary  VARIABLE; SYMBOL;  EXPRESSION;  CONSTANT; FIXED  VALUE; ADDITION;  SUBTRACTION;  PRODUCT; DIVISION;  EXPONENT; TERM; LIKE  TERM; UNLIKE TERM;  COEFFICIENT; POWER;  MONOMIAL; DEGREE;  SHAPES; TRIANGLES;  CIRCLES; PLUS; MINUS;  TIMES; MATH  OPERATIONS;  MULTIPLICATION;  POWER; POLYNOMIAL;  ABSOLUTE VALUE SIGN;  DENOMINATOR;  RADICAL SIGN; | □ Pair work □ Individual work | THE WORK SHEETS. THE QUALITY OF THE INTERACTIONS. SEE OBSERVATION AND ASSESSMENT GRIDS. |
|---------------------|--|--|-------------------------------|---|
|                     |  | Communicative structures WHAT IS? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS THIS IS CAN YOU TELL ME DO YOU KNOW?   |                               |   |

3 20 Skills ☐ Whole • P.1.3.pdf IDENTIFY A STUDENTS HAVE TO COMPARE IN POLYNOMIAL AND **COLOR THE BOXES THAT** class CONTRAST WORKSHEET S R W **BEING ABLE TO** CONTAIN POLYNOMIALS. L ☐ Group BETWEEN THE P.1.3 (link) JUSTIFY A CHOICE IF A BOX DOES NOT work PAIRS. THE **Key vocabulary** CONTAIN A ■ Pair work ANSWERS OF VARIABLE: SYMBOL: POLYNOMIAL, STUDENTS THE PAIRS TO ☐ Individual **EXPRESSION**; HAVE TO WRITE DOWN THF work CONSTANT; FIXED WHAT IS WRONG AND **EXERCISES OF** VALUE; ADDITION; EXPLAIN WHY. THE WORK SUBTRACTION: SHEETS. THE PRODUCT; DIVISION; **OUALITY OF** EXPONENT; TERM; LIKE THE TERM: UNLIKE TERM: INTERACTIONS. COEFFICIENT; POWER; SFF MONOMIAL; DEGREE; **OBSERVATION** SHAPES; TRIANGLES; AND CIRCLES; PLUS; MINUS; ASSESSMENT TIMES; MATH GRIDS. **OPERATIONS:** MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; **DENOMINATOR:** RADICAL SIGN; Communicative structures WHAT IS ... ? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

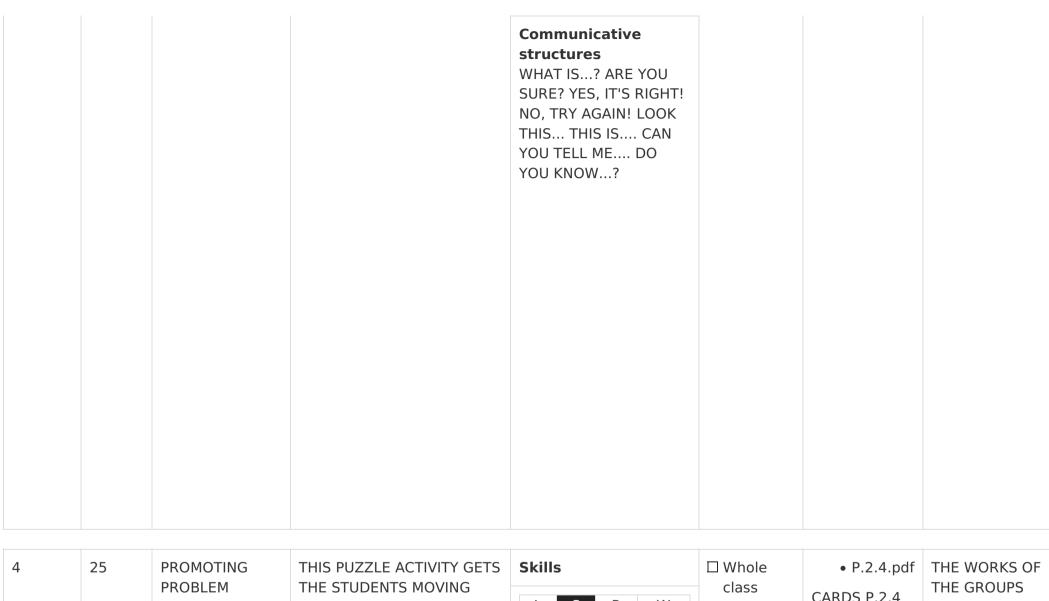
 Unit number
 2
 Lesson number
 2
 Title
 NAMING POLYNOMIALS

| Activity | Timing | Learning<br>Outcomes   | Activity Procedure                                       | Language        | Interaction  | Materials           | Assessment   |
|----------|--------|--|--|-----------------|--|---------------------|--|
| 1        | 15     | INTRODUCING NAMING POLYNOMIALS ACCORDING TO THEIR DEGREE AND NUMBER OF TERMS | WATCH TWO SHORT VIDEOS<br>AND HAVE A SHORT<br>DISCUSSION | Skills  L S R W | ■ Whole class Group work Pair work Individual work | VIDEO: link<br>link | GROUP ASSESSMENT. THE QUALITY OF THE INTERACTIONS. SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION:** CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; **DENOMINATOR:** RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; Communicative structures WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

NAMING WHAT DEGREE MEANS AND ☐ Whole WORKSHEET OF THE PAIRS Skills **POLYNOMIALS** IT IS THE TIME TO NAME class P.2.2 (link) TO THE POLYNOMIALS ACCORDING ☐ Group **EXERCISES OF** S R L W TO THEIR DEGREE AND work THE WORK NUMBER OF TERMS. ■ Pair work SHEETS. THE **Key vocabulary QUALITY OF** ARIABLE; SYMBOL; ☐ Individual THE EXPRESSION; work INTERACTIONS. CONSTANT; FIXED SEE VALUE; ADDITION; OBSERVATION SUBTRACTION; AND PRODUCT; DIVISION; **ASSESSMENT** EXPONENT; TERM; LIKE GRIDS. TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES: TRIANGLES: CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; **QUADRATIC** 

|   |    |                                  |  | Communicative<br>structures<br>WHAT IS? ARE YOU   |  |                                    |  |
|---|----|----------------------------------|--|---|--|------------------------------------|--|
| 3 | 10 | CONSOLIDATING NAMING POLYNOMIALS | THE TEACHER GIVES SOME POLYNOMIALS AND STUDENTS HAVE TO WRITE OUT THE DEGREE AND THE NUMBER OF TERMS AND THEN THEY HAVE TO WRITE THE NAME OF THE POLYNOMIAL. | SURE? YES, IT'S RIGHT!  RIGHT AGAIN! LOOK  THIS THIS IS CAN YOU TEEL MER W  YOU KNOW? Key vocabulary  ARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED  VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH OPERATIONS; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; | □ Whole class □ Group work ■ Pair work □ Individual work | • P.2.3.pdf WORKSHEET P.2.3 (link) | THE ANSWERS OF THE PAIRS TO THE EXERCISES ON THE WORK SHEETS. THE QUALITY OF THE INTERACTIONS. SEE OBSERVATION AND ASSESSMENT GRIDS. |



| 4 | 4 | 25 | PROMOTING     | THIS PUZZLE ACTIVITY GETS | Skills  | ☐ Whole      | <ul> <li>P.2.4.pdf</li> </ul> | THE WORKS OF  |
|---|---|----|---------------|---------------------------|---------|--------------|-------------------------------|---------------|
|   |   |    | PROBLEM       | THE STUDENTS MOVING       |         | class        | CARDS P.2.4                   | THE GROUPS    |
|   |   |    | SOLVING AND   | AND WORKING TOGETHER      | L S R W | ■ Group      |                               | AND THE       |
|   |   |    | CRITICAL      | AND IT INVOLVES THE       |         | work         | (link)                        | QUALITY OF    |
|   |   |    | THINKING,     | NAMES OF DIFFERENT        |         | ☐ Pair work  |                               | THE           |
|   |   |    | THROUGH GIVEN | POLYNONIALS AND MANY      |         | ☐ Individual |                               | INTERACTIONS. |
|   |   |    | PROCEDURES    | DIFFERENT TERMS WHICH     |         | work         |                               | SEE           |
|   |   |    | AND MATERIALS | MUST BE ARRANGED TO       |         |              |                               | OBSERVATION   |
|   |   |    |               | FORM THESE POLYNOMIALS.   |         |              |                               | AND           |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION**; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; Communicative structures WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS.... THIS IS.... CAN

ASSESSMENT GRIDS.

YOU TELL ME.... DO YOU KNOW...?

 Unit number
 2
 Lesson number
 3
 Title
 PARTS OF POLYNOMIALS

| Activity | Timing | Learning<br>Outcomes  | Activity Procedure   | Language        | Interaction  | Materials                          | Assessment  |
|----------|--------|---|--|-----------------|--|------------------------------------|---|
| 1        | 35     | HOW TO IDENTIFY THE DIFFERENT PARTS OF A POLYNOMIAL. REMEMBER THAT TERMS HAVE THE SIGN IN FRONT OF THEM AND FIND THE INVISIBLE NUMBERS (COEFFICIENTS AND EXPONENTS) | AT THE BEGINNING THE TEACHER SHOWS TWO OR THREE EXAMPLES AND THEN THE STUDENTS DO OTHER EXAMPLES ON THEIR OWN. STUDENTS HAVE TO UNDERLINE THE TERM, HIGHLIGHT THE COEFFICIENTS, CIRCLE THE CONSTANT AND REWRITE THE LEADING TERM AND THE LEADING COEFFICIENT AND AT THE END FIND THE DEGREE OF THE POLYNOMIAL. | Skills  L S R W | □ Whole class □ Group work □ Pair work ■ Individual work | • P.3.1.pdf WORKSHEET P.3.1 (link) | TEACHER ASKS QUESTIONS FOR DEPTH OF UNDERSTANDING AND THEY GIVE THE STUDENTS GENUINE FEEDBACK ON THEIR WORK. THE QUALITY OF THE INTERACTIONS. SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION**; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH OPERATIONS; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC;

#### **Communicative structures**

LABEL

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

QUADRATIC; LEADING;



# **Communicative structures**

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

Unit number 2 Lesson number 4 Title INTRODUCTION TO ADDING AND SUBTRACTING POLYNOMIALS

| Activity | Timing | Learning<br>Outcomes                            | Activity Procedure                     | Language        | Interaction  | Materials          | Assessment  |
|----------|--------|---|--|-----------------|--|--------------------|---|
| 1        | 20     | INTRODUCING HOW TO ADD AND SUBTRACT POLYNOMIALS | STUDENTS WATCH TWO SHORT VIDEOS TWICE. | Skills  L S R W | ■ Whole class Group work Pair work Individual work | VIDEO link<br>link | CLASS ASSESSMENT. DIRECT QUESTIONS, SUMMARY PROVIDED BY THE TEACHER THE QUALITY OF THE INTERACTIONS SEE OBSERVATION AND ASSESSMENT GRIDS. |

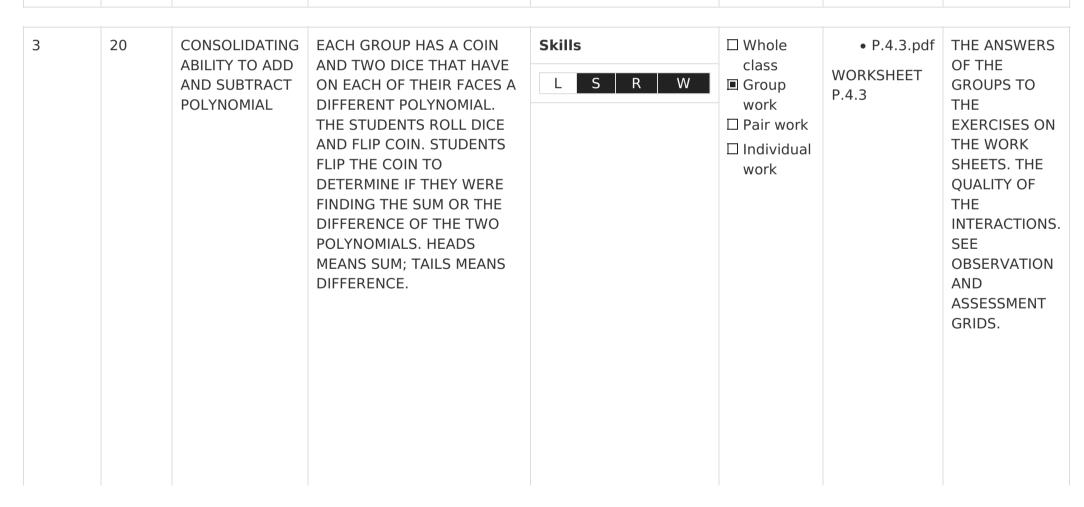
**Key vocabulary** VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC;

#### **Communicative structures**

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

QUADRATIC; LEADING; LABEL; PARENTHESES 2 15 CHECKING PUZZLE ACTIVITY ON ☐ Whole • P.4.2.pdf | COMPARE AND Skills **ABILITY TO ADD** ADDING AND SUBTRACTING CONTRAST class **WORKSHEET** AND SUBTRACT POLYNOMIALS. EACH GROUP ☐ Group BETWEEN THE S R W P.4.2 **POLYNOMIALS** HAS TWO SEPARATE PUZZLE work PAIRS, THE SHEETS EACH PAGE HAS 8 ■ Pair work **ANSWERS OF Key vocabulary QUESTIONS FOR STUDENTS** THE PAIRS AND VARIABLE; SYMBOL; ☐ Individual TO SOLVE. THE QUALITY EXPRESSION; work OF THE CONSTANT; FIXED INTERACTIONS. VALUE; ADDITION; SEE SUBTRACTION; OBSERVATION PRODUCT; DIVISION; AND EXPONENT; TERM; LIKE **ASSESSMENT** TERM; UNLIKE TERM; GRIDS. COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES: TRIANGLES: CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS:** MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; LEADING; LABEL

# Communicative structures WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?



#### **Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION**; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; LEADING; LABEL

#### **Communicative structures**

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN

YOU TELL ME.... DO YOU KNOW...?

Unit number 2 Lesson number 5 Title ADDING AND SUBTRACTING POLYNOMIALS

| Activity | Timing | Learning<br>Outcomes                                      | Activity Procedure  | Language        | Interaction  | Materials                   | Assessment   |
|----------|--------|---|---|-----------------|--|-----------------------------|--|
| 1        | 20     | CONSOLIDATING<br>ADDING AND<br>SUBTRACTING<br>POLYNOMIALS | STUDENTS HAVE TO COMPLETE THE WORKSHEET FINDING THE SUM AND THE DIFFERENCE OF POLYNOMIALS | Skills  L S R W | □ Whole class □ Group work □ Pair work ■ Individual work | • P.5.1.pdf WORKSHEET P.5.1 | THE ANSWERS OF THE STUDENTS TO THE EXERCISES ON THE WORK SHEETS. THE QUALITY OF THE INTERACTIONS SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION**; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; LEADING;

#### **Communicative structures**

LABEL

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...? 2 TEACHER WRITES ON THE ☐ Whole • P.5.2.1.pdf THE ANSWERS 35 BEING ABLE TO Skills DO THE SUM • P.5.2.2.pdf OF THE BOARD 4 POLYNOMIALS. class AND **EACH GROUP HAS 20** ■ Group **GROUPS TO** S R CARDS P.5.2.1 **DIFFERENCE** CARDS: 10 HAVE THE WRITING work P.5.2.2 WITH POLYNOMIALS AND 10 ☐ Pair work AND **Key vocabulary POLYNOMIALS** HAVE AN OPERATION (SUM MATCHING VARIABLE; SYMBOL; ☐ Individual OR DIFFERENCE) **EXERCISES ON EXPRESSION:** work BETWEEN THE THE WORK **CONSTANT: FIXED** POLYNOMIAL WRITTEN ON SHEETS. THE VALUE; ADDITION; **OUALITY OF** THE WHITEBOARD, THE SUBTRACTION; GOAL IS TO PUT THE PRODUCT; DIVISION; TOGETHER THE CARD OF INTERACTIONS. EXPONENT; TERM; LIKE SEE THE OPERATION WITH THE TERM; UNLIKE TERM; CARD WITH ITS RESULT. OBSERVATION COEFFICIENT; POWER; AND MONOMIAL; DEGREE; **ASSESSMENT** SHAPES: TRIANGLES: GRIDS. CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS:** MULTIPLICATION: POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; LEADING; LABEL

# **Communicative structures**

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

Unit number 2 Lesson number 6 Title MULTIPLYING POLYNOMIALS

| Activity | Timing | Learning<br>Outcomes                    | Activity Procedure  | Language        | Interaction  | Materials                                | Assessment  |
|----------|--------|---|---|-----------------|--|--|---|
| 1        | 25     | MULTIPLYING POLYNOMIALS WITH BOX METHOD | TEACHER EXPLAIN WHAT MULTIPLY POLYNOMIALS MEANS. STUDENTS HAVE A SHEET WITH RULES TO MULTIPLY POLYNOMIALS WITH THE BOX METHOD AND TRY TO DO SOME EXERCISES. | Skills  L S R W | □ Whole class □ Group work □ Pair work ■ Individual work | • P.6.1.pdf<br>WORKSHEET<br>P.6.1 (link) | THE ANSWERS OF THE STUDENTS TO THE EXERCISE ON THE WORK SHEETS. SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; EXPRESSION; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; LEADING;

# **Communicative structures**

LABEL

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...? 2 35 CONSOLIDATING ☐ Whole • P.6.2.pdf THE ANSWERS STUDENTS WILL START THE Skills ACTIVITY AT THE "START" OF THE PAIRS AND REVISING class **WORKSHEET ABILITY TO** ARROW AND CONTINUE ☐ Group TO THE R S W P.6.2 MULIPLY THROUGH THE MAZE UNTIL work EXERCISES ON ■ Pair work **POLYNOMIALS** THEY REACH THE "END" THE WORK **Key vocabulary** SPACE MULTIPLYING SHEETS. THE VARIABLE; SYMBOL; ☐ Individual **QUALITY OF** POLYNOMIALS THE ENTIRE **EXPRESSION**; work WAY THE CONSTANT; FIXED INTERACTIONS. VALUE; ADDITION; SEE SUBTRACTION; OBSERVATION PRODUCT; DIVISION; AND EXPONENT; TERM; LIKE **ASSESSMENT** TERM; UNLIKE TERM; GRIDS. COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES: TRIANGLES: CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS:** MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; LEADING; LABEL

# **Communicative structures**

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

 Unit number
 2
 Lesson number
 7
 Title
 SPECIAL BINOMIAL PRODUCTS

| Activity | Timing | Learning<br>Outcomes                        | <b>Activity Procedure</b>   | Language        | Interaction  | Materials | Assessment   |
|----------|--------|---|---|-----------------|--|-----------|--|
| 1        | 35     | KNOW THE TWO MAIN SPECIAL BINOMIAL PRODUCTS | THE STUDENTS READ AND LEARN BY THEMSELVES, WHAT THE SPECIAL PRODUCTS ARE AND HOW THEY CAN CALCULATE THEM. LATER THE STUDENTS DO A QUIZ ONLINE. THE QUIZ IS NOT A TEST: NO ONE IS JUDGING THE STUDENT AND IT IS NOT TIMED. | Skills  L S R W | □ Whole class □ Group work □ Pair work ■ Individual work | link      | QUIZ RESULT. SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION**; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; LEADING;

#### **Communicative structures**

LABEL;

WHAT HAPPENS
WHEN....? THE RESULT
IS.... IT IS CALLED ....
THIS ILLUSTRATION
SHOWS... WE CAN USE
.... THE ANSWER IS
THAT....



| Communicative |
|---------------|
| structures    |

WHAT DOES ......
REPRESENT? WHICH OF ....IS...?

Unit number 2 Lesson number 8 Title CONSOLIDATING POLYNOMIALS

| Activity | Timing | Learning Outcomes   | Activity<br>Procedure                         | Language        | Interaction  | Materials                         | Assessment   |
|----------|--------|---|---|-----------------|--|-----------------------------------|--|
| 1        | 55     | BEING ABLE TO DO THE OPERATIONS WITH POLYNOMIALS AND REVISING TERMINOLOGY | COMPLETE<br>DIFFERENT<br>TYPES OF<br>EXERCISE | Skills  L S R W | □ Whole class □ Group work □ Pair work ■ Individual work | • P.8.1.pdf<br>WORKSHEET<br>P.8.1 | THE ANSWERS OF THE STUDENTS TO THE EXERCISES ON THE WORK SHEETS. SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION**; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; LEADING; LABEL Communicative

#### structures

WHAT IS ... ? LOOK THIS... THIS IS.... DO YOU KNOW...?

Unit number 3 Lesson number 1 Title WHAT ARE EQUATIONS?

| Activity | Timing | Learning<br>Outcomes   | Activity Procedure  | Language        | Interaction  | Materials  | Assessment  |
|----------|--------|--|---|-----------------|--|------------|---|
| 1        | 20     | GLOBAL<br>UNDERSTANDING<br>FIND EXAMPLES<br>AND NON-<br>EXAMPLES | WATCH A SHORT VIDEO<br>ABOUT THE<br>CHARACTERISTICS OF<br>EQUATIONS | Skills  L S R W | ■ Whole class Group work Pair work Individual work | VIDEO link | GROUP/CLASS ASSESSMENT. THE QUALITY OF THE INTERACTIONS SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION: CONSTANT: FIXED** VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; **DENOMINATOR:** RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; EQUATION Communicative structures WHAT IS ... ? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

VOCABULARY AND **TERMINOLOGY IDENTIFY A** POLYNOMIAL AND ITS **CHARACTERISTICS** 

THE DEFINITION OF **EQUATION, ITS** CHARACTERISTICS AND SOME EXAMPLES AND NON-EXAMPLES. STUDENTS WITH THE TEACHER DECIDE WHAT TO WRITE IN THE "DEFINITION" BOX AND THE "CHARACTERISTICS" **BOX. STUDENTS WRITE** THEIR OWN EXAMPLE AND NON-EXAMPLE ON THEIR MAP.

#### Skills



#### **Key vocabulary**

VARIABLE; SYMBOL; **EXPRESSION:** 

CONSTANT; FIXED

VALUE; ADDITION;

SUBTRACTION;

PRODUCT; DIVISION; EXPONENT; TERM; LIKE

TERM; UNLIKE TERM;

COEFFICIENT; POWER;

MONOMIAL; DEGREE;

SHAPES: TRIANGLES: CIRCLES; PLUS; MINUS;

TIMES; MATH

**OPERATIONS:** 

MULTIPLICATION:

POWER; POLYNOMIAL;

ABSOLUTE VALUE SIGN;

DENOMINATOR;

RADICAL SIGN;

BINOMIAL; TRINOMIAL;

LINEAR; QUARTIC;

QUINTIC; CUBIC;

QUADRATIC; EQUATION

Whole WORKSHEET class

☐ Group

work

☐ Pair work

☐ Individual

work

E.1.2

OF THE **GROUPS TO** THE **EXERCISES ON** THE WORK SHEETS. THE **QUALITY OF** THE INTERACTIONS. SEE OBSERVATION AND **ASSESSMENT** GRIDS.

|   |    |                            |               | Communicative                                 |                 |              |                      |
|---|----|----------------------------|---------------|---|-----------------|--------------|----------------------|
|   |    |                            |               | structures                                    |                 |              |                      |
| 3 | 15 | CONSOLIDATING              | MAKE A POSTER | SKING IS? ARE YOU                             | ■ Whole         | • E.1.3.pdf  | THE QUALITY          |
|   |    | AND REVISING               |               | SURE? YES, IT'S RIGHT!                        | class           | POSTER E.1.3 | OF THE               |
|   |    | VOCABULARY AND TERMINOLOGY |               | NO, TO SALE RELOWK                            | ☐ Group<br>work |              | INTERACTIONS.<br>SEE |
|   |    | 12111111102001             |               | THIS THIS IS CAN Key yecabulary O             | ☐ Pair work     |              | OBSERVATION          |
|   |    |                            |               | VARIABLE: SYMBOL;<br>FOR KNOW;<br>EXPRESSION; | □ Individual    |              | AND                  |
|   |    |                            |               | CONSTANT; FIXED                               | work            |              | ASSESSMENT<br>GRIDS. |
|   |    |                            |               | VALUE; ADDITION;                              |                 |              |                      |
|   |    |                            |               | SUBTRACTION;                                  |                 |              |                      |
|   |    |                            |               | PRODUCT; DIVISION;                            |                 |              |                      |
|   |    |                            |               | EXPONENT; TERM; LIKE                          |                 |              |                      |
|   |    |                            |               | TERM; UNLIKE TERM;<br>COEFFICIENT; POWER;     |                 |              |                      |
|   |    |                            |               | MONOMIAL; DEGREE;                             |                 |              |                      |
|   |    |                            |               | SHAPES; TRIANGLES;                            |                 |              |                      |
|   |    |                            |               | CIRCLES; PLUS; MINUS;                         |                 |              |                      |
|   |    |                            |               | TIMES; MATH                                   |                 |              |                      |
|   |    |                            |               | OPERATIONS;                                   |                 |              |                      |
|   |    |                            |               | MULTIPLICATION; POWER; POLYNOMIAL;            |                 |              |                      |
|   |    |                            |               | ABSOLUTE VALUE SIGN;                          |                 |              |                      |
|   |    |                            |               | DENOMINATOR;                                  |                 |              |                      |
|   |    |                            |               | RADICAL SIGN;                                 |                 |              |                      |
|   |    |                            |               | BINOMIAL; TRINOMIAL;                          |                 |              |                      |
|   |    |                            |               | LINEAR; QUARTIC;                              |                 |              |                      |
|   |    |                            |               | QUINTIC; CUBIC;                               |                 |              |                      |
|   |    |                            |               | QUADRATIC; EQUATION                           |                 |              |                      |
|   |    |                            |               |   |                 |              |                      |
|   |    |                            |               |   |                 |              |                      |
|   |    |                            |               |   |                 |              |                      |
|   |    |                            |               |   |                 |              |                      |
|   |    |                            |               |   |                 |              |                      |

| Communicative structures WHAT IS? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS THIS IS CAN YOU TELL ME DO YOU KNOW? |  |  |
|--|--|--|
|--|--|--|

 Unit number
 3
 Lesson number
 2
 Title
 INVERSE OPERATIONS AND BALANCED SCALE PROBLEMS

| Activity | Timing | Learning<br>Outcomes | Activity Procedure                      | Language        | Interaction  | Materials                         | Assessment   |
|----------|--------|----------------------|---|-----------------|--|-----------------------------------|--|
| 1        | 15     | INVERSE OPERATIONS   | STUDENTS HAVE TO FIND INVERSE OPERATION | Skills  L S R W | □ Whole class □ Group work □ Pair work ■ Individual work | • E.2.1.pdf<br>WORKSHEET<br>E.2.1 | THE ANSWERS OF THE STUDENTS TO THE EXERCISES OF THE WORK SHEETS. SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION**; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; EQUATION Communicative structures WHAT IS ... ? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

ABILITY TO BALANCE WITH NUMBER.

WORKSHEET AND REMINDS THE STUDENTS THAT THE SCALES ARE ALL BALANCED. THE STUDENTS MUST CHOOSE A NUMBER TO FILL IN THE BOXES IN EACH PROBLEM THAT WILL KEEP THEM BALANCED. WHICHEVER NUMBER THE STUDENT CHOOSES FOR A PROBLEM, THEY MAY ONLY USE THAT NUMBER.

#### Skills



#### **Key vocabulary**

VARIABLE; SYMBOL; EXPRESSION:

CONSTANT; FIXED

VALUE; ADDITION;

 ${\tt SUBTRACTION};$ 

PRODUCT; DIVISION; EXPONENT; TERM; LIKE

TERM; UNLIKE TERM;

COEFFICIENT; POWER;

MONOMIAL; DEGREE;

SHAPES; TRIANGLES;

CIRCLES; PLUS; MINUS;

TIMES; MATH

OPERATIONS; MULTIPLICATION:

POWER; POLYNOMIAL;

ABSOLUTE VALUE SIGN;

DENOMINATOR;

RADICAL SIGN;

BINOMIAL; TRINOMIAL;

LINEAR; QUARTIC;

QUINTIC; CUBIC;

QUADRATIC; EQUATION

☐ Whole class

- ☐ Group work
- ☐ Pair work
- Individual work

WORKSHEET E.2.2 (link)

ANSWERS OF THE STUDENTS TO THE EXERCISES ON THE WORK SHEETS. SEE OBSERVATION AND ASSESSMENT

GRIDS.

| Communicative<br>structures<br>WHAT IS? ARE YOU<br>SURE? YES, IT'S RIGHT!<br>NO, TRY AGAIN! LOOK<br>THIS THIS IS CAN<br>YOU TELL ME DO<br>YOU KNOW? |  |  |
|---|--|--|
|   |  |  |

 Unit number
 3
 Lesson number
 3
 Title
 SOLVING EQUATIONS

| Activity | Timing | Learning<br>Outcomes | Activity Procedure  | Language        | Interaction  | Materials | Assessment  |
|----------|--------|----------------------|---|-----------------|--|-----------|---|
| 1        | 20     | SOLVING EQUATIONS    | TEACHER GIVES A LINK. THE STUDENTS READ AND DO EXERCISES THAT THEY FIND ON THE WEBPAGE. | Skills  L S R W | □ Whole class □ Group work □ Pair work ■ Individual work | link      | THE ANSWERS OF THE STUDENTS TO THE MULTIPLE CHOICE EXERCISES AND WRITING EXERCISES. SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION: CONSTANT: FIXED** VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; **DENOMINATOR:** RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; EQUATION Communicative structures WHAT IS ... ? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

ABILITY TO **EQUATIONS TO SOLVE ON** Skills SOLVE THE WHITEBOARD AND GIVES **EQUATIONS** TO STUDENTS A FLOW CHART TO HELP THEM WITH THEIR WORK. THE SOLVING **EQUATIONS FOLDABLE ASKS** STUDENTS ABOUT THEIR **EQUATION STEP BY STEP.** 

☐ Whole class ☐ Group S R W work ■ Pair work **Key vocabulary** VARIABLE; SYMBOL; ☐ Individual EXPRESSION; work CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES: TRIANGLES: CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS:** MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; EQUATION

WORKSHEET E.3.2 (link)

CONTRAST BETWEEN THE PAIRS. THE ANSWERS OF THE PAIRS TO THE **EXERCISES ON** THE WORK SHEET. THE **QUALITY OF** THE INTERACTIONS. SEE OBSERVATION AND **ASSESSMENT** 

GRIDS.

# Communicative structures

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?

 Unit number
 3
 Lesson number
 4
 Title
 CONSOLIDATING EQUATIONS

| Activity | Timing | Learning<br>Outcomes                   | Activity Procedure   | Language        | Interaction  | Materials         | Assessment  |
|----------|--------|--|--|-----------------|--|-------------------|---|
| 1        | 55     | BEING<br>ABLE TO<br>SOLVE<br>EQUATIONS | STUDENTS SOLVE ONE STEP EQUATIONS WHILE PLAYING BINGO. THEY HAVE 25 ONE STEP EQUATION PROBLEMS (INCLUDES FRACTIONS, NEGATIVE,), AN ANSWER KEY, AND 30 DIFFERENT CARDS. STUDENTS MUST COVER THE SPACES. | Skills  L S R W | □ Whole class □ Group work □ Pair work ■ Individual work | • E.4.1.pdf E.4.1 | THE ANSWERS OF THE STUDENTS TO THE EQUATIONS. SEE OBSERVATION AND ASSESSMENT GRIDS. |

**Key vocabulary** VARIABLE; SYMBOL; **EXPRESSION**; CONSTANT; FIXED VALUE; ADDITION; SUBTRACTION; PRODUCT; DIVISION; EXPONENT; TERM; LIKE TERM; UNLIKE TERM; COEFFICIENT; POWER; MONOMIAL; DEGREE; SHAPES; TRIANGLES; CIRCLES; PLUS; MINUS; TIMES; MATH **OPERATIONS**; MULTIPLICATION; POWER; POLYNOMIAL; ABSOLUTE VALUE SIGN; DENOMINATOR; RADICAL SIGN; BINOMIAL; TRINOMIAL; LINEAR; QUARTIC; QUINTIC; CUBIC; QUADRATIC; EQUATION

# **Communicative structures**

WHAT IS...? ARE YOU SURE? YES, IT'S RIGHT! NO, TRY AGAIN! LOOK THIS... THIS IS.... CAN YOU TELL ME.... DO YOU KNOW...?