Lesson 1

Display ERS Lesson 1, or display Colour Masters (see page xii).

---

1 *Refer to ERS Question 1 or Colour Master.*
SNAPSHOT

1	2	3	4	5	6	7	8	9	10	11	12

When counting from 1, the first 12 numbers are: **ONE, TWO, THREE, FOUR** *(pause)* **FIVE, SIX, SEVEN, EIGHT** *(pause)* **NINE, TEN, ELEVEN, TWELVE**.
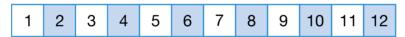
Look at the number **FIVE** *(continue pointing to 5)*.

If you add **1 more** to 5 *(point to 6 and pause)* you get the next number.

QUESTION 1 What number is **1 more** than **FIVE**? *(Repeat question)*
Write your answer in today's column next to Question 1.

---

2 *Refer to ERS Question 2 or Colour Master.*
SNAPSHOT

1	2	3	4	5	6	7	8	9	10	11	12

Listen: **TWELVE, ELEVEN, TEN, NINE** *(pause)* **EIGHT, SEVEN, SIX, FIVE** *(pause)* **FOUR, THREE, TWO, ONE**.

Look at the number **FIVE** *(continue pointing to 5)*.

If you subtract 1 from 5 you get **FOUR**.

FOUR is **1 less** than 5.

QUESTION 2 What number is **1 less** than **FIVE**? *(Repeat question)*
Write your answer in today's column next to Question 2.

---

3 *Refer to ERS Question 3 or write on board.*
SNAPSHOT

4 + 1 = 5
1 + 4 = 5
↑   ↑
TURNAROUNDS

A number family is made up of 3 numbers.

These facts use the same number family 1, 4, 5.

This fact says **FOUR ADD ONE EQUALS FIVE**.

This fact says **ONE ADD FOUR EQUALS FIVE**.

We will call these facts **TURNAROUNDS** because 1 and 4 have changed places with each other.

QUESTION 3 Look at the turnarounds. Which **2 numbers** have changed places with each other? *(Repeat question)*

Write your answer in today's column next to Question 3.

---

4 *Refer to ERS Question 4 or write on board.*
SNAPSHOT

10

When you write the number 10, **ONE** is the first digit you write and **ZERO** is the next.

10 is a 2-digit number.

QUESTION 4 How many digits in the number 10? *(Repeat question)*

Write your answer in today's column next to Question 4.

---

5 *Refer to ERS Question 5 or Colour Master.*
SNAPSHOT

This **ARRAY** is made of 5 columns: (*point down each column*) **A**, **B**, **C**, **D**, **E**; and 2 rows: (*point across each row*) **F**, **G**.

There are 2 squares in each column.

There are 5 squares in each row.

QUESTION 5 How many squares in the **SHADED COLUMN**? *(Repeat question)*

Write your answer in today's column next to Question 5.

Correct all questions.

DEBUG directly after corrections.

ANSWER KEY

1.1	6
1.2	4
1.3	1, 4 (or 4, 1)
1.4	2
1.5	2

STRATEGIC THINKING UNIT

JET Pack

This unit consists of 20 interlinked lessons. No printed guidance is offered to the students. The intention is to encourage students to solve problems on their own. Explain that challenges like these often can't be solved immediately.

Materials

Each student needs:

1 × Jet Pack Student Mat (**JPSM 1**) ideally laminated (page 349)

1 × Jet Pack Student Mat (**JPSM 2**) ideally laminated (page 351)

1 × Jet Pack Piece Sheet (**JPPS**) ideally printed on card of contrasting colour to the **JPSM** (page 347)

For this lesson distribute JPPS.

Describe the Activity.

Activity: From the **JPPS** student cuts out Puzzle Pieces (4 piece set) to be put aside for the following lessons. Envelope optional.

Lesson 2

Display ERS Lesson 2, or display Colour Masters (see page xii).

---

1   *Refer to ERS Question 1 or Colour Master.*

SNAPSHOT

1	2	3	4	5	6	7	8	9	10	11	12

When counting from 1, the first 12 numbers are: **ONE, TWO, THREE, FOUR** *(pause)* **FIVE, SIX, SEVEN, EIGHT** *(pause)* **NINE, TEN, ELEVEN, TWELVE**.

Look at the number **FOUR** *(continue pointing to 4)*.

If you add **1 more** to 4 *(point to 5 and pause)* you get the next number.

QUESTION 1   What number is **1 more** than **FOUR**? *(Repeat question)* Write your answer in today's column next to Question 1.

---

2   *Refer to ERS Question 2 or Colour Master.*

SNAPSHOT

1	2	3	4	5	6	7	8	9	10	11	12

Listen: **TWELVE, ELEVEN, TEN, NINE** *(pause)* **EIGHT, SEVEN, SIX, FIVE** *(pause)* **FOUR, THREE, TWO, ONE**.

Look at the number **FOUR** *(continue pointing to 4)*.

If you subtract 1 from 4 you get **THREE**.

THREE is **1 less** than 4.

QUESTION 2   What number is **1 less** than **FOUR**? *(Repeat question)*

3 *Refer to ERS Question 3 or write on board.*

SNAPSHOT

$$3 + 1 = 4$$
$$1 + 3 = 4$$
↑   ↑
TURNAROUNDS

A number family is made up of 3 numbers.

These facts use the same number family 1, 3, 4.

This fact says **THREE ADD ONE EQUALS FOUR**.

This fact says **ONE ADD THREE EQUALS FOUR**.

We will call these facts **TURNAROUNDS** because 1 and 3 have changed places with each other.

QUESTION 3 Look at the turnarounds. Which **2 numbers** have changed places with each other? *(Repeat question)*

4 *Refer to ERS Question 4 or write on board.*

SNAPSHOT

10

When you write the number 10, **ONE** is the first digit you write and **ZERO** is the next.

10 is a 2-digit number.

QUESTION 4 Write the 2-digit number which is **less** than 11. *(Repeat question)*

5 *Refer to ERS Question 5 or Colour Master.*

SNAPSHOT

A B C D E (above the grid, 2 rows × 5 columns, first column shaded) F, G

This **ARRAY** is made of 5 columns: (*point down each column*) **A**, **B**, **C**, **D**, **E**; and 2 rows: (*point across each row*) **F**, **G**.

There are 2 squares in each column.

There are 5 squares in each row.

QUESTION 5 How many squares in the **TOP ROW**? *(Repeat question)*

Correct all questions.

DEBUG directly after corrections.

ANSWER KEY

2.1	5
2.2	3
2.3	1, 3 (or 3, 1)
2.4	10
2.5	5

STRATEGIC THINKING UNIT

JET Pack

This unit consists of 20 interlinked lessons. No printed guidance is offered to the students. The intention is to encourage students to solve problems on their own. Explain that challenges like these often can't be solved immediately.

Materials

Each student needs:

1 × Jet Pack Student Mat (**JPSM 1**) ideally laminated (page 349)
1 × Jet Pack Student Mat (**JPSM 2**) ideally laminated (page 351)
1 × Jet Pack Piece Sheet (**JPPS**) ideally printed on card of contrasting colour to the **JPSM** (page 347)

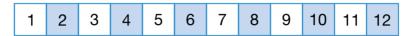**For this lesson distribute student JPPS cut outs.**

Describe the Challenge.

Challenge: Use 2 of the 4 pieces to make 1 triangle with no gaps or overlaps.

Lesson 3

Display ERS Lesson 3, or display Colour Masters (see page xii).

1 *Refer to ERS Question 1 or Colour Master.*

SNAPSHOT

1	2	3	4	5	6	7	8	9	10	11	12

When counting from 1, the first 12 numbers are: **ONE, TWO, THREE, FOUR** *(pause)* **FIVE, SIX, SEVEN, EIGHT** *(pause)* **NINE, TEN, ELEVEN, TWELVE**.
Look at the number **SEVEN** *(continue pointing to 7)*.
If you add **1 more** to 7 *(point to 8 and pause)* you get the next number.

QUESTION 1 What number is **1 more** than **SEVEN**? *(Repeat question)*
Write your answer in today's column next to Question 1.

2 *Refer to ERS Question 2 or Colour Master.*

SNAPSHOT

1	2	3	4	5	6	7	8	9	10	11	12

Listen: **TWELVE, ELEVEN, TEN, NINE** *(pause)* **EIGHT, SEVEN, SIX, FIVE** *(pause)* **FOUR, THREE, TWO, ONE**.
Look at the number **SEVEN** *(continue pointing to 7)*.
If you subtract 1 from 7 you get **SIX**.
SIX is **1 less** than 7.

QUESTION 2 What number is **1 less** than **SEVEN**? *(Repeat question)*

3 *Refer to ERS Question 3 or write on board.*

6 + 1 = 7
? + 6 = 7
↑   ↑
TURNAROUNDS

A number family is made up of 3 numbers.
These facts use the same number family 1, 6, 7.
This fact says **SIX ADD ONE EQUALS SEVEN**.

QUESTION 3 This turnaround fact has a **MISSING NUMBER** *(point to ?).*
What is the missing number? *(Repeat question)*

---

4 *Refer to ERS Question 4 or write on board.*

6

When you write the number 6, you write 1 digit only.
SIX is a single-digit number.

QUESTION 4 How many digits in the number 6. *(Repeat question)*

---

5 *Refer to ERS Question 5 or Colour Master.*

A   B   C   D   E

F

G

This **ARRAY** is made of 5 columns: *(point down each column)* **A**, **B**, **C**, **D**, **E**;
and 2 rows: *(point across each row)* **F**, **G**.
There are 2 squares in each column.
There are 5 squares in each row.

QUESTION 5 How many squares in **EACH ROW**? *(Repeat question)*

Correct all questions.

DEBUG directly after corrections.

ANSWER KEY	
3.1	8
3.2	6
3.3	1
3.4	1
3.5	5

STRATEGIC THINKING UNIT

JET Pack

This unit consists of 20 interlinked lessons. No printed guidance is offered to the students. The intention is to encourage students to solve problems on their own. Explain that challenges like these often can't be solved immediately.

Materials

Each student needs:

1 × Jet Pack Student Mat (**JPSM 1**) ideally laminated (page 349)

1 × Jet Pack Student Mat (**JPSM 2**) ideally laminated (page 351)

1 × Jet Pack Piece Sheet (**JPPS**) ideally printed on card of contrasting colour to the **JPSM** (page 347)

For this lesson distribute student JPPS cut outs.

Describe the Challenge.

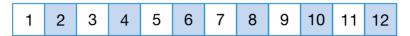Challenge: Use 2 of the 4 pieces to make the smallest rectangle possible. No gaps or overlaps.

Lesson 4

Display ERS Lesson 4, or display Colour Masters (see page xii).

---

1 *Refer to ERS Question 1 or Colour Master.*
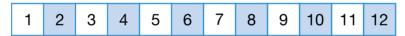SNAPSHOT

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

When counting from 1, the first 12 numbers are: **ONE, TWO, THREE, FOUR** *(pause)* **FIVE, SIX, SEVEN, EIGHT** *(pause)* **NINE, TEN, ELEVEN, TWELVE**.
Look at the number **NINE**.
If you add **1 more** to 9 you get the next number.

QUESTION 1 What number is **1 more** than **NINE**? *(Repeat question)*
Write your answer in today's column next to Question 1.

---

2 *Refer to ERS Question 2 or Colour Master.*
SNAPSHOT

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

Listen: **TWELVE, ELEVEN, TEN, NINE** *(pause)* **EIGHT, SEVEN, SIX, FIVE** *(pause)* **FOUR, THREE, TWO, ONE**.
Look at the number **NINE**.
EIGHT is **1 less** than 9.

QUESTION 2 What number is **1 less** than **NINE**? *(Repeat question)*

3 *Refer to ERS Question 3 or write on board.*

SNAPSHOT

9 + 1 = 10
? + 9 = 10

TURNAROUNDS

A number family is made up of 3 numbers.

These facts use the same number family 1, 9, 10.

This fact says **NINE ADD ONE EQUALS TEN**.

QUESTION 3 This turnaround fact has a **MISSING NUMBER** *(point to ?)*.
What is the missing number? *(Repeat question)*

---

4 *Refer to ERS Question 4 or write on board.*

SNAPSHOT

9

When you write the number 9, you write 1 digit only.

NINE is a single-digit number.

QUESTION 4 Write the single-digit number which is **more** than 8.
(Repeat question)

---

5 *Refer to ERS Question 5 or Colour Master.*

SNAPSHOT

This **ARRAY** is made of 5 columns: *(point down each column)* **A**, **B**, **C**, **D**, **E**;
and 2 rows: *(point across each row)* **F**, **G**.

There are 2 squares in each column.

There are 5 squares in each row.

QUESTION 5 How many squares in **EACH COLUMN**? *(Repeat question)*

Correct all questions.

DEBUG directly after corrections.

ANSWER KEY

4.1	10
4.2	8
4.3	1
4.4	9
4.5	2

STRATEGIC THINKING UNIT

JET Pack

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Materials

Each student needs:

1 × Jet Pack Student Mat (**JPSM 1**) ideally laminated (page 349)

1 × Jet Pack Student Mat (**JPSM 2**) ideally laminated (page 351)

1 × Jet Pack Piece Sheet (**JPPS**) ideally printed on card of contrasting colour to the **JPSM** (page 347)

For this lesson distribute student JPPS cut outs.
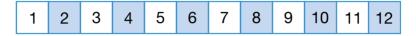
Describe the Challenge.

Challenge: Use 2 of the 4 pieces to make the largest rectangle possible. No gaps or overlaps.

Lesson 5

Display ERS Lesson 5, or display Colour Masters (see page xii).

1 *Refer to ERS Question 1 or Colour Master.*

SNAPSHOT

1	2	3	4	5	6	7	8	9	10	11	12

When counting from 1, the first 12 numbers are: **ONE, TWO, THREE, FOUR** *(pause)* **FIVE, SIX, SEVEN, EIGHT** *(pause)* **NINE, TEN, ELEVEN, TWELVE**.

Look at the number 11.

QUESTION 1 What number is **1 more** than **ELEVEN**? *(Repeat question)* Write your answer in today's column next to Question 1.

2 *Refer to ERS Question 2 or Colour Master.*

SNAPSHOT

1	2	3	4	5	6	7	8	9	10	11	12

Listen: **TWELVE, ELEVEN, TEN, NINE** *(pause)* **EIGHT, SEVEN, SIX, FIVE** *(pause)* **FOUR, THREE, TWO, ONE**.

Look at the number 11.

QUESTION 2 What number is **1 less** than **ELEVEN**? *(Repeat question)*

3 *Refer to ERS Question 3 or write on board.*

SNAPSHOT

10 + 1 = 11
 ? + 10 = 11
   ↑   ↑

TURNAROUNDS

These facts use the same number family 1, 10, 11.

QUESTION 3 This turnaround fact has a **MISSING NUMBER** *(point to ?).*
What is the missing number? *(Repeat question)*

---

4 *Refer to ERS Question 4 or write on board.*

SNAPSHOT

12

QUESTION 4 How many digits in the number **TWELVE**?
(Repeat question)

---

5 *Refer to ERS Question 5 or Colour Master.*

SNAPSHOT

A   B   C   D   E

This **ARRAY** is made of 5 columns and 2 rows.
There are 2 small squares in each column.
There are 5 small squares in each row.

QUESTION 5 How many small squares **altogether**? *(Repeat question)*

Correct all questions.

DEBUG directly after corrections.

Before next lesson students should complete the Round Task.

ANSWER KEY	
5.1	12
5.2	10
5.3	1
5.4	2
5.5	10

STRATEGIC THINKING UNIT

JET Pack

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Materials

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1 × Jet Pack Student Mat (**JPSM 1**) ideally laminated (page 349)

1 × Jet Pack Student Mat (**JPSM 2**) ideally laminated (page 351)

1 × Jet Pack Piece Sheet (**JPPS**) ideally printed on card of contrasting colour to the **JPSM** (page 347)

For this lesson distribute student JPPS cut outs.

Describe the Challenge.

Challenge: Use all 4 pieces to make the longest shape possible. No gaps or overlaps. Each piece can only be used once.