

Aliens Game

Matching Calculations



$$2 \times 8 + 5 \times 6 =$$

2 times 8
add 5 times
6 equals



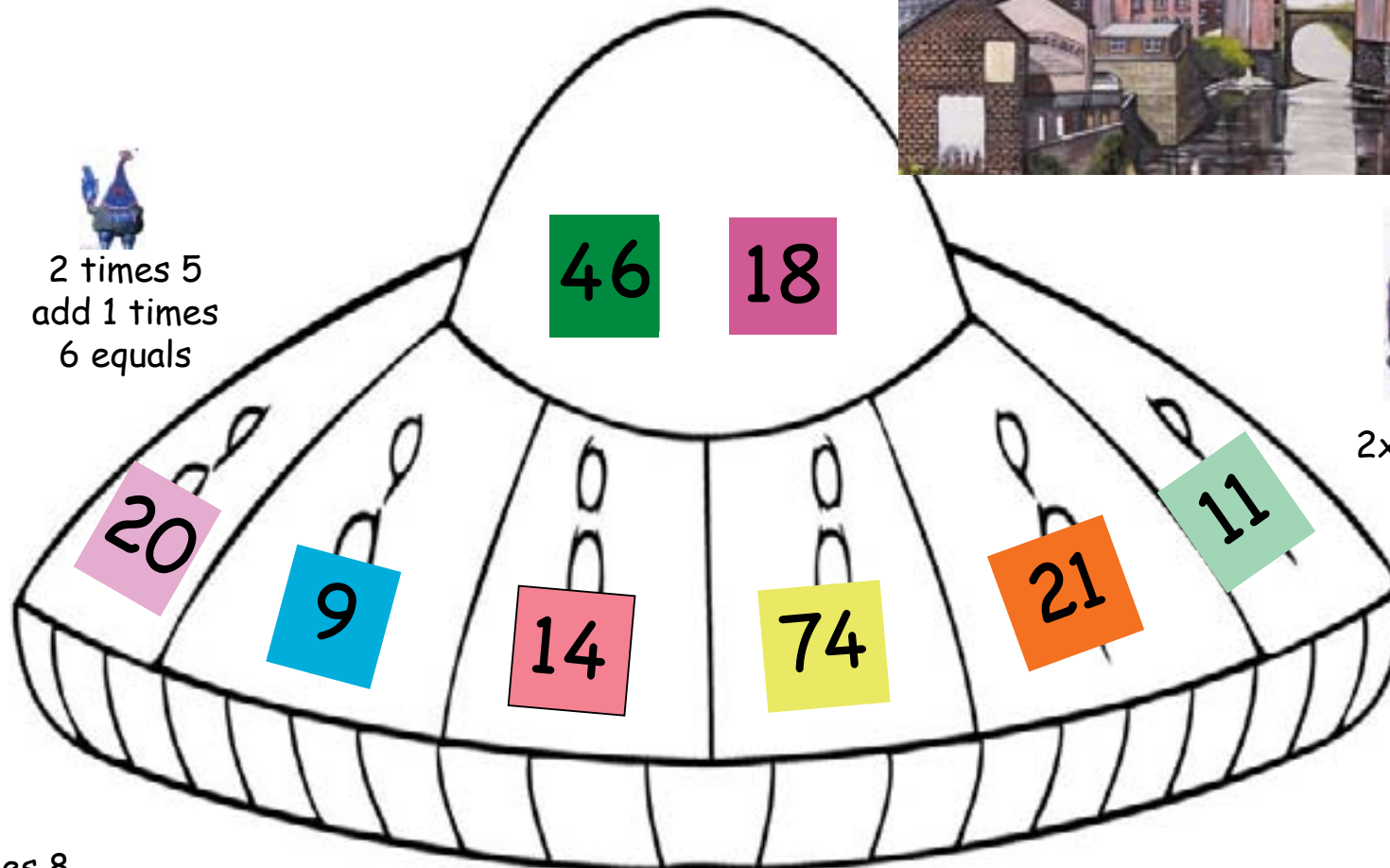
2 times 5
add 1 times
6 equals



1 times 6
add 6 times
2 equals

$$1 \times 6 + 1 \times 8 =$$

2 times 8
add 1
times 5
equals



$$2 \times 2 + 2 \times 8 =$$



The Stockport Railway viaduct was built in 1848 and contains eleven million bricks. It is one of the largest brick structures in the world.

Aliens Game - Matching Calculations

This game was made by Y2 and Y3 children and teachers in Stockport.

Learning Objective: To work out and match multiplication and addition calculations involving words and numbers.

Aim of the activity: To work out matching calculations to find out where the aliens are sitting in the space ship.

The webaddress for this activity is:

<http://www.collaborativlearning.org/matchingcalculations.pdf>

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COLLABORATIVE LEARNING PROJECT

Project Director: Stuart Scott

We support a network of teaching professionals to develop and disseminate accessible talk-for-learning activities in all subject areas and for all ages.

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BRIEF SUMMARY OF BASIC PRINCIPLES BEHIND OUR TEACHING ACTIVITIES:

The project is a teacher network, and a non-profit making educational trust. Our main aim is to develop and disseminate classroom tested examples of effective group strategies that promote talk across all phases and subjects. We hope they will inspire you to develop and use similar strategies in other topics and curriculum areas. We want to encourage you to change them and adapt them to your classroom and students. We run teacher workshops and conferences worldwide but mainly in the UK. The project posts online many activities in all subject areas. An online newsletter is also updated regularly.

*These activities are influenced by current thinking about the role of language in learning. They are designed to help children learn through talk and active learning in small groups. They work best in non selective classes where children in need of language or learning support are integrated. They are well suited for the development of speaking and listening. They provide teachers ideal opportunities for assessment of spoken language.

*They provide scaffolding for differentiation by placing a high value on what children can offer to each other on a particular topic, and also give children the chance to respect each other's views and formulate shared opinions which they can disseminate to peers. By helping them to take ideas and abstract concepts, discuss, paraphrase and move them about physically, they help to develop thinking skills. We strongly endorse the principles of the Learning Without Limits group to which we belong.

*They give children the opportunity to participate in their own words and language in their own time without pressure. Many activities can be tried out in pupils' first languages and afterwards in English. A growing number of activities are available in more than one language, not translated, but mixed, so that you may need more than one language to complete the activity.

*They encourage study skills in context, and should therefore be used with a range of appropriate information books which are preferably within reach in the classroom.

*They are generally work effectively over a wide age range because children can bring their own knowledge to an activity and refer to books at an appropriate level. The activities work like catalysts.

*All project activities were planned and developed by teachers working together, and the main reason they are disseminated is to encourage teachers to work with each other inside and outside the classroom. They have made it possible for mainstream and language and learning support teachers to share an equal role in curriculum delivery. They should be adapted to local conditions. In order to help us keep pace with curriculum changes, please send any new or revised activities back to the project, so that we can add them to our lists of materials.

Our activities are designed to:

...build on prior knowledge.

...move from concrete to abstract.

...ensure everyone works with everyone else.

...extend social language into curriculum language.

...provide motivating ways to go over the same topic more than once.

Aliens Game - Matching Calculations

Resources

Alien Space ship board (A3) with numbers in windows (children could make own which are usually more attractive!)

Set of multiplication and addition alien word and number cards (8 cards)

Set of step multiplication and addition word and number cards (8 cards)

Set of step multiplication and addition number cards (8 cards)

Set of answer cards (8 cards)

Playing the Game

The game can be played in a number of different ways depending upon age, ability and number of children taking part.

1. Each table given a copy of the spaceship (or groups make own)

Aliens picture cards given out for children to read, calculate and match to correct window.

Other sets of cards could also be placed on table for children to calculate and match to correct window; noticing different ways of showing same calculation.

Winning table is one to place all aliens in correct windows.

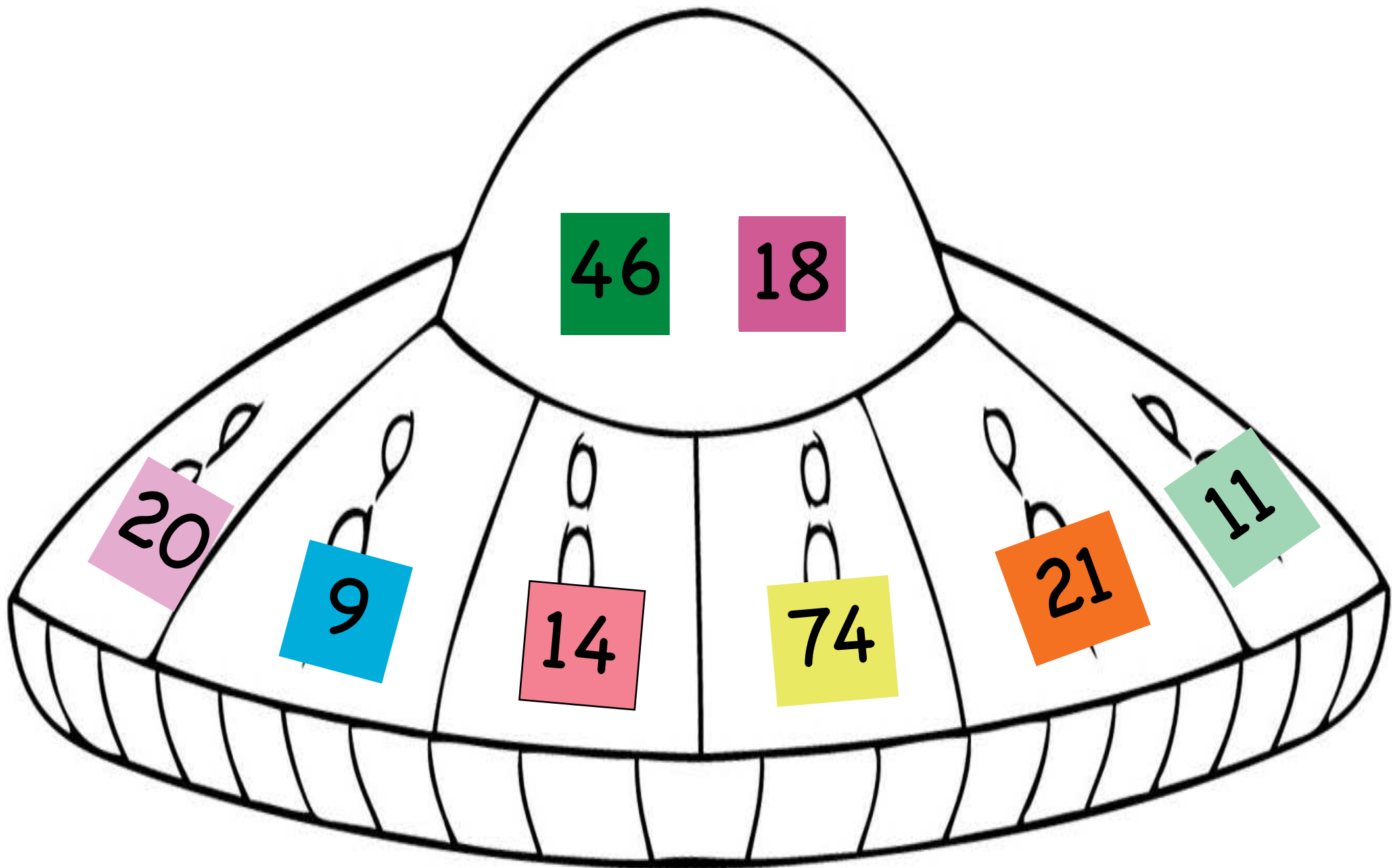
2. All cards given out to class.

Children read cards and calculate answers, then find two other children with same calculations set out in a different way.

They then put their cards in a pile, with alien card on top and place in correct window of spaceship.

Who will place their aliens in the window first?

We have added an empty space ship plus some larger matching cards with easier calculations plus blank alien cards for making up more calculations. This could grow and grow!



46

18

20

9

14

74

21

11

Set 1



Set 2

| | | | |
|-----------------------------|-----------------------------|-------------------------------|-----------------------------|
| $2 \times 2 + 2 \times 8 =$ | $2 \times 8 + 5 \times 6 =$ | $1 \times 5 + 2 \times 2 =$ | $2 \times 8 + 1 \times 5 =$ |
| $1 \times 6 + 6 \times 2 =$ | $1 \times 6 + 1 \times 8 =$ | $10 \times 5 + 12 \times 2 =$ | $1 \times 5 + 1 \times 6 =$ |

Answers

| | | | |
|----|----|----|----|
| 11 | 21 | 46 | 18 |
| 9 | 74 | 14 | 20 |









Set 3

| | | | |
|--------------------------------------|--------------------------------------|---|---|
| 2 times 2 add 2 times 8 equals | 2 times 8 add 5 times 6 equals | 1 times 5 add 2 times 2 equals | 2 times 8 add 1 times 5 equals |
| 1 times 6 add 6 times 2 equals | 1 times 6 add 1 times 8 equals | 10 times 5 add 12 times 2 equals | 2 times 5 add 1 times 6 equals |

Set 1

| | | | |
|---|---|---|--|
|  |  |  |  |
|  |  |  |  |









Set 4

| | | | |
|--|--|--|--|
|  $2 \times 2 + 2 \times 8 =$ |  $2 \times 8 + 5 \times 6 =$ |  $1 \times 5 + 2 \times 2 =$ |  $2 \times 8 + 1 \times 5 =$ |
|  $1 \times 6 + 6 \times 2 =$ |  $1 \times 6 + 1 \times 8 =$ |  $10 \times 5 + 12 \times 2 =$ |  $1 \times 5 + 1 \times 6 =$ |

Answers

| | | | |
|----|----|----|----|
| 11 | 21 | 46 | 18 |
| 9 | 74 | 14 | 20 |

Set 5

| | | | |
|---|---|--|---|
|  2 times 2 add 2 times 8 equals |  2 times 8 add 5 times 6 equals |  1 times 5 add 2 times 2 equals |  2 times 8 add 1 times 5 equals |
|  1 times 6 add 6 times 2 equals |  1 times 6 add 1 times 8 equals |  10 times 5 add 12 times 2 equals |  2 times 5 add 1 times 6 equals |



$$5 \times 4$$



$$20 + 20 + 6$$



$$5 + 4$$



$$3 \times 7$$



$$6 \times 3$$



$$20 - 6$$



$$60 + 10 + 4$$



$$21 - 10$$

