

## Formation of the Solar System

### Key Stage 2

**Topics covered:** main parts of the Solar System – Sun, planets, moons, comets and asteroids

Watch the video "How did the Solar System form?".

<https://vimeo.com/259687037>



How the Solar System formed is still something that scientists are trying to fully understand. There are still some things that we don't know – but studying exoplanet systems (other planets going around other stars can give us an idea about how planets and other objects form around a star.

This resource is aimed at KS2 and is all about the key components of the Solar System and how they formed. We will be starting off with some teacher notes; these will give you an outline of the activities included and any information you may find useful. You will then find printable activity sheets for your students and any answer sheets too – enjoy!

**Teacher's Notes:**

We recommend that you start off by showing your students our video 'How did the Solar System form?'

There are two activities included in this resource for your students to try. Each activity includes written instructions for the students.

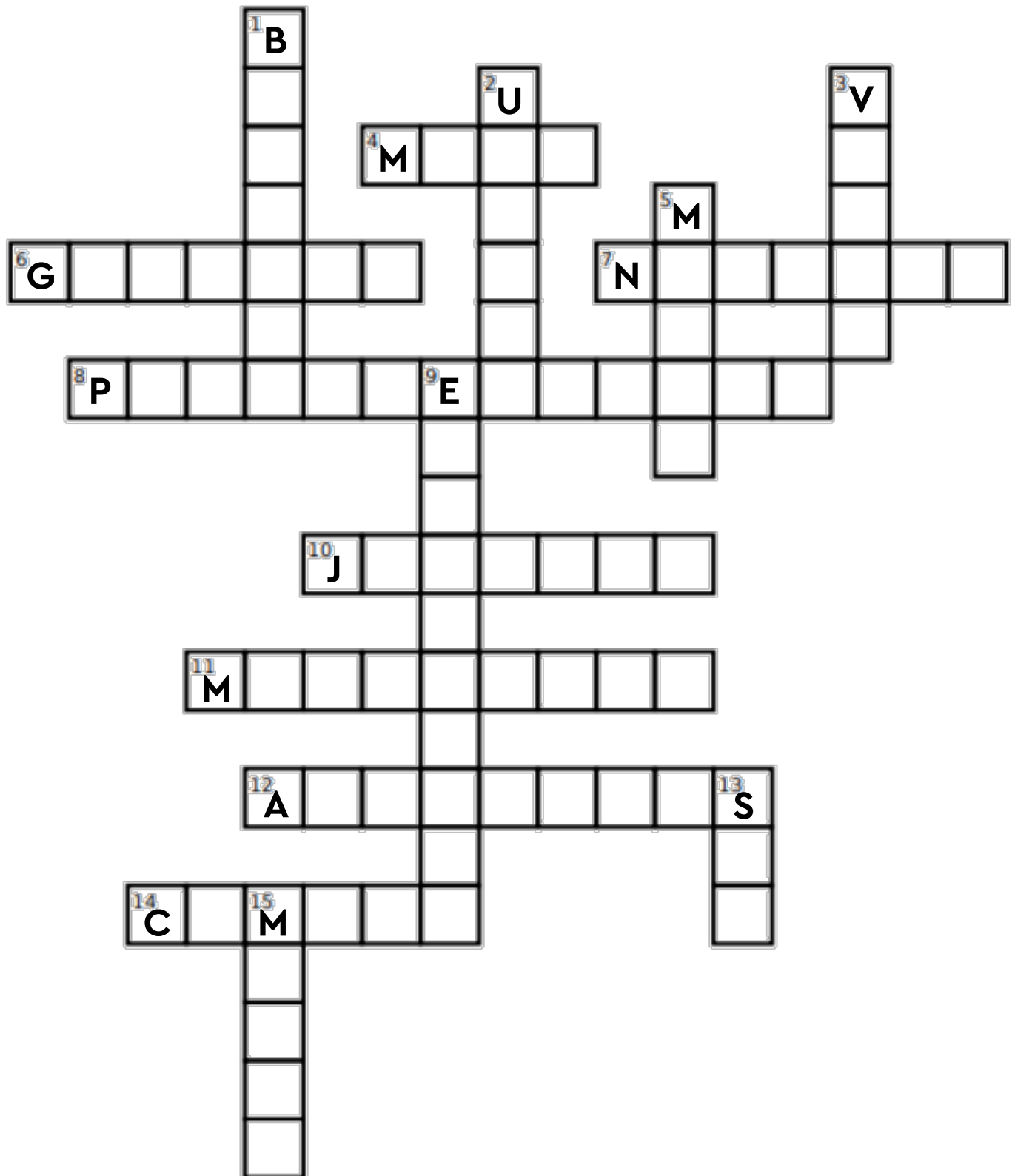
Activity 1 is a crossword (pg. 3-4) aimed at getting your students to recap what they learnt whilst watching the video. It could be used to test their prior knowledge before watching the video to see what they already know but your students will probably find it easier to tackle this activity after they have watched the video. Remember to print these pages one-sided rather than double-sided!

Activity 2 is a chance for students to create a comic strip that summarises the main stages in the formation of the Solar System (pg. 5-6). They are encouraged to use the words from the crossword in their descriptions. This should help recap the main learning points. This resource contains a template comic strip. We've used questions in each box to prompt students of the main stages. Although the worksheet is a standard A4 size, you may want to print the worksheet out on A3 paper so your students have more room to write their descriptions and draw their illustrations.

Answers to the crossword and an example comic strip are attached at the end of this resource.

## Activity 1 - Solar System crossword

After watching the video 'How did the Solar System form?' complete the crossword below to find 15 keywords.



## Activity 1 - Solar System crossword clues

### Down

1. Our Solar system is thought to be about 4.5 **B** \_ \_ \_ \_ \_ years ago.
2. Which planet was knocked onto its side by an impact? **U** \_ \_ \_ \_ \_
3. Which planet is spinning in the opposite direction to all the others? **V** \_ \_ \_ \_
5. The rocky planets are made of chunks of rock and **M** \_ \_ \_ \_
9. What do we call planets which orbit other stars?  
**E** \_ \_ \_ \_ \_ \_ \_ \_ \_
13. Which object was the first to form in the Solar System? **S** \_ \_
15. Objects which were captured by planets and now orbit around them are called **M** \_ \_ \_ \_

### Across

4. Jupiter swallowed up lots of material around it – which planet is smaller in size than expected as a result? **M** \_ \_ \_
6. Our Sun formed from a huge cloud of material which was pulled together and planets are kept in orbit around the Sun. Which force is responsible for both of these things? **G** \_ \_ \_ \_ \_ \_
7. There are two ice giant planets. Uranus is one, which is the other?  
**N** \_ \_ \_ \_ \_ \_
8. What are the large pieces / the building blocks of planets called?  
**P** \_ \_ \_ \_ \_ \_ \_ \_ \_ \_
10. Which planet do scientists think formed first? **J** \_ \_ \_ \_ \_ \_
11. Just like humans and animals which may move from one place to another, planets moved closer and further from the Sun in their early lifetime – we call this  
**M** \_ \_ \_ \_ \_ \_ \_
12. What are the rocky leftover pieces of rock in the Solar System called?  
**A** \_ \_ \_ \_ \_ \_ \_
14. Scientists think that perhaps water was brought to the Earth by  
**C** \_ \_ \_ \_ \_

## Activity 2 – Solar System comic strip

Create a short comic strip using the sheet you've been given. Your comic strip should show the main steps of how the Solar System formed.

There are questions in each box to remind you of the main things.

Try to use as many of the keywords from the crossword in your comic strip descriptions!

# How did the Solar System form?

## Student Activity

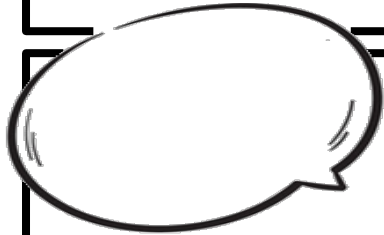
1. How was the Sun created?



3. What are asteroids?



2. Which planet formed first?



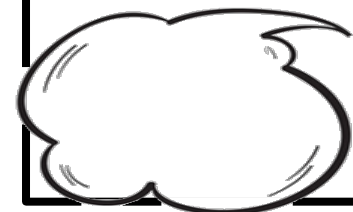
5. What did the Sun do that stopped the inner planets growing bigger?



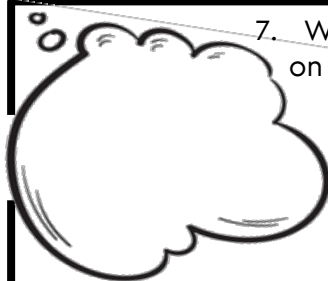
4. Why is Mars small?



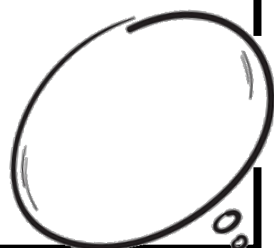
6. What is the Oort cloud filled with?



7. Where might the water on Earth have come from?



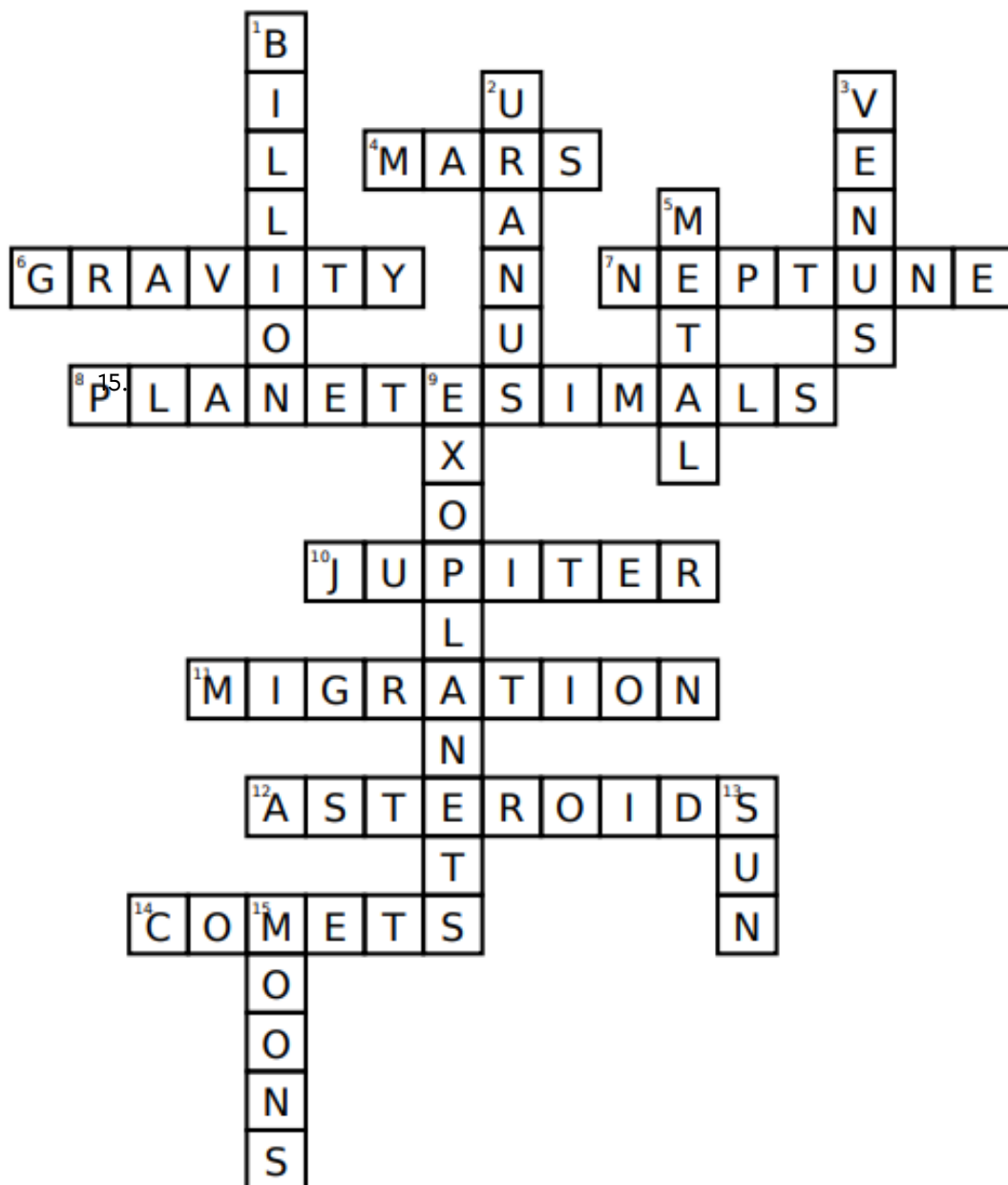
8. How did planets get their moons?



## Formation of the Solar System: **ANSWERS**

### Key Stage 2

#### 1. Solar System crossword



## Formation of the Solar System: **ANSWERS**

### Key Stage 2

#### 2. Solar System comic strip - example

