### Key Points

#### Rocks
- How rocks are formed
- Different kinds of rocks
- Fossils
- Soil

**Key Learning Points:**
- Recognise that soils are formed from rocks and organic matter?
- Describe how rocks can be useful to us.
- Recognise that soils are formed from different rocks based on their simple physical properties.
- Identify that minerals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. **Biology 3.2.1**
- Identify that humans and some other animals have skeletons and muscles for support, protection and movement. **Biology 3.5.1**

#### The Fastest Human (Usain Bolt)
- Nutrition, linked to what we eat
- Skeletons and muscles

**Key Learning Points:**
- How long will it take you to run 100m?
- What role does the skeletal system play in animals?
- How does the arm joint work and what role do the muscles have in helping the arm to move?
- Why is a nutritious balanced diet important?
- How does the food we eat get transported around our body?
- How can you create a movement that links six different balances, using your body?

#### Are you attractive enough?
- How magnets attract/repel some materials
- Magnetic poles
- Friction

**Key Learning Points:**
- How can you show that your shadow changes according to the position of the Sun?
- Why do footballers in a night match often have four shadows?
- How can you explain the relationship between the Sun and the Moon (in terms of lighting up the moon)?
- How can you set up an experiment to show how shiny things respond in the dark?
- Reflection: Put together a photo story of the completed challenge.

#### How far can you throw your shadow?
- Sources, including the Sun
- Protecting eyes from the Sun
- Shadows
- Reflection /mirrors

**Key Learning Points:**
- How do you classify igneous and sedimentary rocks?
- How can you classify igneous and sedimentary rocks based on their simple physical properties?
- Describe and explain how different rocks can be useful to us. **Chemistry 3.1.1**
- Describe how fossils are formed.
- Recognise that rocks are formed from rocks and organic matter?

#### How did that blossom become an apple?
- Function of different parts of plants
- What different plants need to flourish?
- Journey of water through a plant
- Life cycle of a plant

**Key Learning Points:**
- What is blossom and why is it so important for our plants?
- What happens to the water that you put into the soil to help a plant grow?
- What do we mean by seed dispersal and why is it so important for our plants?
- Why is it so important for us to look after the bees in our country?
- Reflection: Choose one of these areas and perform a presentation to the

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<table>
<thead>
<tr>
<th>Y3</th>
<th>Rocks</th>
<th>Animals (including humans)</th>
<th>Forces and Magnets</th>
<th>Light</th>
<th>Plants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RHJS</strong></td>
<td><strong>What do rocks tell us about the way the Earth was formed?</strong> Topic Link- Ancient Greece</td>
<td><strong>The Fastest Human (Usain Bolt)</strong> Topic Link- Ancient Greece</td>
<td><strong>Are you attractive enough?</strong> Topic Link- Fiery Earth</td>
<td><strong>How far can you throw your shadow?</strong> Topic Link- Mediterranean Holidays</td>
<td><strong>How did that blossom become an apple?</strong> Topic Link- Cadbury World</td>
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**WOW: Bring in a collection of rocks and let the children touch and talk about them, children create their own version of Stonehenge.**

**WOW: Check to see how far each child can run in the 9.68 secs (this is the world record for 100m) and compare with Usain Bolt’s world record run.**

**WOW: Use torches to create different shapes and attempt to photograph them.**

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<tr>
<th><strong>Rhys</strong></th>
<th><strong>What Skills</strong></th>
<th><strong>Challenge</strong></th>
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<td><strong>Can they classify igneous and sedimentary rocks.</strong></td>
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**Biology 3.4a2**

**Chemistry 3.3.1**

**Physics 3.1.1**

**Physics 3.1.2**

**Physics 3.1.3**

**Physics 3.1.4**

**Physics 3.1.5**

**Physics 3.3.1**

**Physics 3.3.2**

**Physics 3.3.3**

**Physics 3.3.4**

**Biology 3.4a1**

**Biology 3.4a2**

**Biology 3.4a3**

**Biology 3.5.1**

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**Reflection:**

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**WOW: Children create their own creature or figure using paperclips make a chain /use magnets to create a tug of war. What can they change to make their figure win?**

**WOW: Use torches to create different shapes and attempt to photograph them.**

**WOW: Check to see how far each child can run in the 9.68 secs (this is the world record for 100m) and compare with Usain Bolt’s world record run.**

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**Key Learning Points:**

- What is blossom and why is it so important for our plants?
- What happens to the water that you put into the soil to help a plant grow?
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- Why is it so important for us to look after the bees in our country?
- Reflection: Choose one of these areas and perform a presentation to the
### Rocks
- Make accurate measurements using standard units.
- Record their observations in different ways (labelled diagrams, charts etc.)
- Describe what they have found using scientific words.

**Challenge**
- Can children record and present what they have found using scientific language, drawings, labelled diagrams, bar charts, keys and tables.

### Animals (including humans)

**Key Skills**
- Children to:
  - Use different ideas and suggest how to find something out.
  - Make and record a prediction before testing.
  - Plan a fair test and explain why it was fair.
  - Set up a simple fair test to make comparisons.
  - Explain why they need to collect information to answer a question.
  - Observe that magnetic forces can be transmitted without direct contact.
  - Talk about how some magnets attract or repel each other.
  - Classify which materials are attracted to magnets.
  - Describe the speed and direction of moving objects.

**Challenge**
- Can they investigate the strengths of different magnets and find fair ways to compare them.

### Forces and Magnets
- Measure using different equipment and units of measure.
- Record their observations in different ways (labelled diagrams, charts etc.)
- Describe what they have found using scientific words.
- Make accurate measurements using standard units.
- Explain what they have found out and use their measurements to say whether it helps to answer their question.
- Explain what dark is using words like shadow.

**Challenge**
- Can they investigate the strengths of different magnets and find fair ways to compare them.

### Light

**Key Skills**
- Children to:
  - Record their observations in different ways (labelled diagrams, charts etc.)
  - Describe what they have found using scientific words.
  - Make accurate measurements using standard units.
  - Explain what they have found out and use their measurements to say whether it helps to answer their question.
  - Explain what dark is using words like shadow.

**Challenge**
- Can they explain why their shadow changes when the light source is moved closer or further from the object.

### Plants
- rest of the class: Why are bees important to us? Where did that apple come from? What is seed dispersal?

**Key Skills**
- Children to:
  - Record their observations in different ways (labelled diagrams, charts etc.)
  - Describe what they have found using scientific words.
  - Identify and describe the functions of different parts of plants (roots, stem, leaves and flowers)
  - Identify what a plants needs for life and growth.
  - Describe the ways in which nutrients, water and oxygen are transported within plants.
  - Explain how the needs and functions of plant parts vary from plant to plant e.g. insect and wind pollinated plants.
  - Investigate the way in which water is transported within plants.

**Challenge**
- Can they classify a range of common plants according to many criteria (environment found, size, climate required, etc.)

### Trips and Experiences

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<tbody>
<tr>
<td>Visit to Cheddar Gorge or Wooky Hole</td>
<td>Visit to Hagley Stadium, invite an athlete or dietician</td>
<td>Visit to Think Tank</td>
<td>MAC shadow puppet theatre</td>
</tr>
<tr>
<td>Birmingham Art Gallery to look at sculptures</td>
<td>Visit an ice gym</td>
<td>Forest School- mirror view walk</td>
<td>Visit to Botanical Gardens, Bingo out in forest School</td>
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<tr>
<td>Use rocks and stones to create their own rockeries. Top trump stones, rocks, crystals. Poetry linked to precious stones</td>
<td>Junk modelling to show movement</td>
<td>Use filings and paint to create pictures using magnets to move the filings through the paint.</td>
<td>Tell a story through shadows</td>
</tr>
<tr>
<td></td>
<td></td>
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<td>Shadow art</td>
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<td>Use white carnations and food colouring to show how water travels along the stem of a plant. Plant their own seeds Make a mini beehive</td>
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