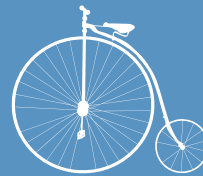


Bike for Life



Teamwork: to understand that people are different

Science Investigative Skills: use scientific understanding to explain and justify thoughts and ideas.



Activating Personal Capabilities

www.smart-science.co.uk

Another creative science resource from
the Centre for Science Education



Generic Task

Who Are You?



Learning objective

Teamwork: to understand that people are different

Introducing the task 5 minutes

Explain that teamwork relies on people working together and playing to each other's strengths where possible, and appreciating and managing their needs and possible limitations as well. Everyone is different – everyone is unique.

This task explores a wide range of physical differences between people. Ask the children whether they think there is anyone in the world who is just like them? What would this mean – they'd need to look like them, speak like them, walk like them, talk like them, like the same foods... etc. What could happen if we were exactly the same? Consider some scenarios where this could be a good/fun thing, e.g. if you're trying on clothes, if you need someone to play with, or when this could be a bad thing, e.g. if the police are out to catch someone who has done something bad and they look and sound just like you!

Running the task 15 minutes

You need:

- Three sets of 'Who Are You?' cards (one for each child, one to place in the centre of the table)
- Card holders – e.g. clothes pegs laid horizontally – enough for two sets of cards

1. Organise the children into pairs. Provide them with a set of cards each and one set to be placed face down between them)
2. Ask the children to place their crowd cards in front of them, with each standing up using the pegs. These should face away from the other player.
3. Each child chooses one card from the table, making sure not to show it to the other player.
4. Explain that each of the children is ask each other questions, e.g. Is the person wearing a hat? Has the person got black hair? Note that the questions should be 'closed' questions, not like 'What colour

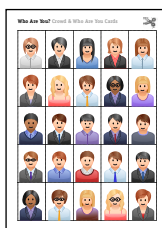
hair has the person got?' 'How old is he or she?'

5. Using the answers the children receive they should knock down the members of their crowd who do not match the description being gained.
6. The winner is the child who manages to identify the person on the other players card the quickest. This will rely on how good their questions are and how well they are able to identify the differences between the members of the crowd.

Helpful Hints

This task is a mock up of the standard 'Whose Who?' game which can be purchased at low cost. In order to limit the need for making multiple sets, children can be organised in teams. They should be encouraged to confer over questions that they could ask. Modeling the game is highly recommended before play.

Resources





Science Embedded Task Bike for Life



Learning objective

Personal capabilities: Teamwork: to understand that people are different

Science: Breath of study: 1a, b, 2a, b

Pupils should be taught knowledge, skills and understanding through:

- to learn in a contexts that is familiar and interest them
- to use scientific language to communicate ideas and explain the behaviour of living things, materials, phenomena and processes
- to recognise that there are hazards in living things, materials and physical processes and assess risks and take action to reduce risks to themselves and others.

Success criteria

To be successful the children will:

- recognise that different people in a team have different needs and different strengths
- work as a team to discuss and make decisions using understanding that people are different
- use scientific understanding to explain and justify their thoughts and ideas.

Introducing the task 10 minutes

Explain to the children that the task is about working as a team, recognising that people in a team can be different and have different strengths and needs. Relate this back to the generic task where the children were identifying physical

differences. Explain that differences are much more than skin deep with all of us.

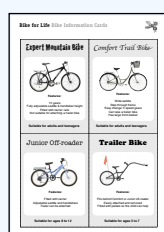
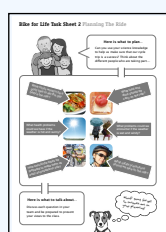
Running the task 60 minutes (plus time for presentations if desired)

1. Organise the children to work in teams of up to four.
2. Read through **Task Sheet 1 – Which bike for each person?**, that sets the context for the activity.
3. Provide each person in the team with one of the Bike Information Cards. Emphasise that the members of the group should exchange information by reading out the cards rather than passing them round. If wished, cards could be given to pairs of children

rather than individuals. The children should decide on a suitable bike for each member of the sponsored bike ride team. Share feedback from the teams with the whole class and discuss reasons why particular bikes might have suited certain people. 20 minutes is suggested for this part of the task.

4. Move on to **Task Sheet 2 – Planning the Ride**. Emphasise that the teams need to discuss the various questions and give their recommendations with scientific reasons to back them up. Allow time for discussion and then share feedback from each team with the whole class. If wished, different teams could

Resources





focus on different questions.
Planning the Ride Support Cards
can be used to help individuals or
teams with ideas as appropriate.

Reviewing the task

Ask the children for examples of
different ways the people in the bike
ride differed and how those
differences could be taken into
account to allow them to work as a
team. If appropriate, ask them about
differences between people within
their own groups and how these help
them work as a team.

Involve the children in making an
overall judgement about how they
worked on the task using the
assessment for learning Smart Grid.



Who Are You? Who Are You Cards



Bike for Life Task Sheet 1 Which bike for which person?



Here is what happened...

When Dad was knocked off his bike last year we were really worried. The helicopter which took him to hospital saved his life. Now that Dad is completely better all the family want to do a **sponsored bike ride** to raise money for the air ambulance.



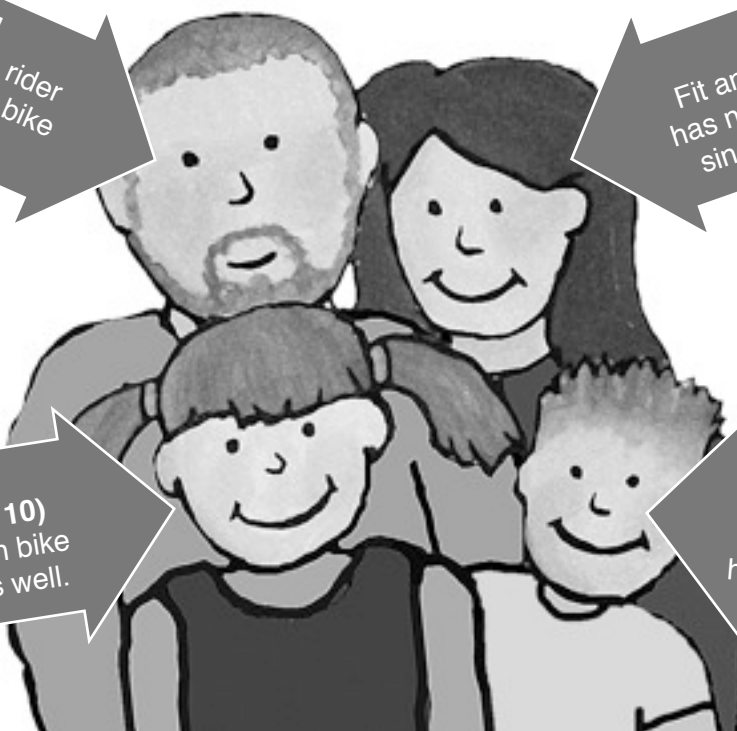
Here is our family team...

Dad
A keen bike rider
who uses his bike
every day.

Mum
Fit and healthy but
has not ridden a bike
since she was 12!

Me!
(Laura, age 10)
I ride my own bike
every day as well.

Tom (age 4)
Rides his own bike
with stabilisers but
has only got little legs



Judy (aged 8)
Our Jack Russell
terrier who will run
some of the way...

(but will probably need
a lift later in the day!)



Here is your task...

Work as a team. Take it in turns to read out the bike hire card you have been given. Then discuss and decide which bike would be best for each person in the family.

Bike for Life Task Sheet 2 Planning The Ride



Here is what to plan...

Can you use your science knowledge to help us make sure that our cycle trip is a success? Think about the different people who are taking part....

What foods would it be a good idea to eat the day before the ride?



What food and drink should we carry on the ride?



What health problems could we have if the weather is hot and sunny?



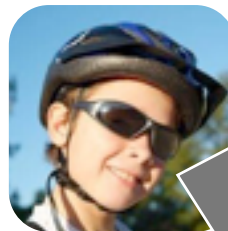
What problems could we encounter if the weather is wet and windy?



How should the bikes be prepared to make them as easy as possible to ride?



What safety precautions should we take on the ride?



Here is what to talk about...

Discuss each question in your team and be prepared to present your views to the class.



Woof! Don't forget to include me in your planning!



Expert Mountain Bike



Features:

- 15 gears
- Fully adjustable saddle & handlebar height
- Fitted with carrier rack
- Not suitable for attaching a trailer bike

Suitable for adults and teenagers

Comfort Trail Bike



Features:

- Wide saddle
- Step through frame
- 'Easy change' 5 speed gears
- Can take a trailer bike
- Has large front basket

Suitable for adults and teenagers

Junior Off-roader



Features:

- Fitted with carrier
- Adjustable saddle and handlebars
- Trailer can be attached

Suitable for ages 8 to 12

Trailer Bike



Features:

- Fits behind Comfort or Junior off-roader
- Easily attached and removed
- Fitted with pedals so the child can help

Suitable for ages 3 to 7

Bike for Life Planning The Ride Support Cards



What foods would it be a good idea to eat the day before the ride?



- ➔ What foods would give energy the next day?
- ➔ What food or drink would it be good to avoid?
- ➔ What would be a good time to eat the day before?

What food and drink should we carry on the ride?



- ➔ What foods would provide a quick source of energy?
- ➔ What food and drink would be easy to carry?
- ➔ What would people need drinks for?

What health problems could we get if the weather is hot and sunny?



- ➔ What about people sweating a lot?
- ➔ What about protecting people's skin?
- ➔ What about protecting people's eyes?
- ➔ What about hats?

What problems could we encounter if the weather is wet and windy?



- ➔ What about people keeping warm?
- ➔ Could windy weather change how fast the bike goes?
- ➔ What about people keeping dry?
- ➔ Will wet weather make the bike harder to ride?

How should the bikes be prepared to make them as easy as possible to ride?






- ➔ What about the saddle and handlebars?
- ➔ What about the tyres?
- ➔ What about friction?

What safety precautions should we take on the ride?



- ➔ What about carrying things?
- ➔ What about being seen easily?
- ➔ What about protective clothing?

 <p>We were great at the task because ...</p>	<p>we learnt that different people in a team can have different needs, e.g. ...</p> <hr/> <p>we learnt that different people in a team can have different strengths, by ...</p> <hr/> <p>we decided how particular bikes would match people's needs, e.g. ...</p> <hr/> <p>we worked as a team to use our scientific knowledge and understanding to help plan the bike ride, e.g. ...</p>	<p>Next time we will ...</p>
 <p>We were good at the task because ...</p>		
 <p>We were okay at the task because ...</p>		

Smart Science is the only teaching pack to bring together personal capabilities and scientific enquiry.

Infusing teamwork, creativity, problem solving, communication and self management into fun contexts through generic and science embedded tasks. Incorporating Assessment for Learning, this pack provides an exciting way to motivate, engage and raise achievement in Primary Science.

For more information please visit: www.smart-science.co.uk

Or contact: Centre for Science Education, Sheffield Hallam University, Howard Street, Sheffield S1 1WB
Telephone: 0114 225 4870

