

Activity Sheet 1

Scientists Today



Andy Maneffa

Our scientist this week is researching ways to make healthier sweets, although he admits that they will probably not be so healthy that your mum asks you to eat them instead of your Brussel sprouts! He told **Scientists Today** that his work includes reading a lot about the work that other scientists have done as well as doing practical experiments. He enjoys helping other people to understand the science that he has done.

When we interviewed him he admitted that he didn't always want to work with food but was interested in a completely different branch of science. When he was younger he was fascinated with dinosaurs and had wanted to be a palaeontologist.

Balancing work, rest and play leads to a healthy lifestyle

Andy has always enjoyed an active lifestyle. He plays football with the other scientists in his department at York University and enjoys walking, hiking and going to the gym.

At home he often cooks and enjoys rustling up healthy meals.

He also realised at an early age how important it was to study science at school if he wanted to do a job like this. He went on to study science at University and has never looked back.

Did You Know...

Andy was born on Christmas Day. He says that makes him feel special, but he never had a party with his friends on his actual birthday!



Scientists Today: Personality Profile

Each week we give our scientist a personality test. This is what we found out about Andy...

Andy is passionate about sharing information and knowledge about science with as many people as possible. He is an excellent communicator and good at putting facts in a way that people understand. He is also very diplomatic which means that he is good at helping people get along together. He is good at understanding different subjects and is able to collect lots of different ideas together.

Activity Sheet 2

Scientists Today



Jenny Lewis

Our scientist this week uses a special machine called a spectrometer. She told **Scientists Today** that this helps her to detect tiny amounts of substances. She went on to explain that the amount of each substance is so tiny that it cannot be smelt or seen, so the spectrometer is the only way that scientists can tell that they are there.

Scientists Today wanted to know why Jenny needed to do this. “Well, it is quite complicated” she explained “But the information that I collect is used to make some of the machines that they use in hospitals even better.” She smiled as she added “It’s very satisfying to know that I’m helping doctors to find the correct treatments for people and help cure their illnesses.”

Glad to have studied science at school

Jenny told **Scientists Today** that she sometimes wonders what would have happened if she hadn’t chosen to study science when she was at secondary school.

“You know, if I had made a different choice then, I would not have been able to go on to study science at university and would not be able to do this important work!” she explained.

Did You Know...

Jenny has a wide range of hobbies. She enjoys reading both fiction and non-fiction books.

She also enjoys ballet, skiing, diving and sailing. Phew! She made us feel tired just thinking about all of those activities. We wonder how she finds time to go to work?

Scientists Today: Personality Profile

Each week we give our scientist a personality test. This is what we found out about Jenny...

Jenny is very organised, good at paying attention to the details and quick to spot and correct mistakes. She is creative and practical and this, combined with her ability to spot when something is not quite right, means that she is good at building and making things. She likes to help people build their skills and helps them to understand things.

Activity Sheet 3

Scientists Today



Annie Hodgson

Schools Liaison and Outreach Officer

Our scientist of the week teaches science to university students. “The type of science I specialise in is called chemistry,” she told **Scientists Today**. “Chemists are interested in what things are made of and also mixing together different ingredients to make new products. This can be as common as mixing ingredients to make a cake or as exciting as developing a new medicine” she explained.

Scientists Today asked Annie if her work involved a lot of explosions. “Everyone always thinks that” she laughed. “No, science is not really about explosions, it is about finding out more about the world and also making useful things, such as shampoo, paint or medicines, that can make our lives better.”

Beaver Scout Leader shares science with York scouts

A little bird tells us at **Scientists Today** that Beaver Scouts in the York area particularly enjoy pack meetings when their leader plans activities for them based around science.

“It is really exciting when we get to do experiments and find things out” enthused one Beaver (aged 7). *“It’s made me think that I would like to be a scientist when I grow up!”* Of course their leader is none other than our own scientist of the week Annie Hodgson, so it is no surprise that she has given York Beavers such exciting experiences. You would think that with being a full time scientist and a busy scout leader Annie would not have time for anything else, but you would be wrong! She also finds time to sing and play the violin in her spare time.



Scientists Today: Personality Profile

Each week we give our scientist a personality test. This is what we found out about Annie ... Annie is confident and creative. She is happy working alone but also very good at listening to other people and working in a team. She has a strong sense of honesty and is willing to speak out if she thinks anything is not fair. She is passionate about sharing her knowledge with everyone from school children to other scientists.

Activity Sheet 4

Scientists Today



Liz Fear

Our scientist this week works at the cutting edge of medical research.

She is working on ways to improve the accuracy of Nuclear Magnetic Resonance (NMR) which doctors use to look inside people's bodies.

Being able to look in more detail inside people's bodies will help doctors to diagnose illness earlier and more accurately. This will mean that life-saving treatments can be offered more quickly.

Liz has a son who is 6 and a daughter who is 4.

Scientist swaps ski slopes for exciting medical research

Liz told **Scientists Today** that before she took on her current role as a research scientist she worked for several years as a ski guide in Italy.

She lived there for 16 years and speaks fluent Italian. As energetic as ever she continues to enjoy yoga and walking.



Scientists Today: Personality Profile

Each week we give our scientist a personality test. This is what we found out about Liz ...

Liz is very organised and conscientious and is good at paying attention to the details which can make the difference between success and failure. She likes to help people, and is good at listening to them to find out what their needs are. She is also good at explaining science to people who are not scientists (from school children to politicians). She works well in a team and can get people to work together effectively.

Activity Sheet 5

Scientists Today



Avtar Matharu
Scientist and Lecturer

Our scientist this week is determined to make the world a better place and believes that science is an important way to do this.

Avtar told **Scientists Today** that he is able to use his skills as a scientist to find ways to make useful products from materials that would be thrown away and which would pollute our beautiful planet.

He also works with science students at the University of York to teach them how they can use science to make our lives more sustainable. He told **Scientists Today** that his students chose to study science when they were at school so that they had the right qualifications to study at university.

Today's Scientist tells us that cooking is like science!

Everyone at **Scientists Today** was curious when Avtar told us that cooking is like science! He explained that no-one ever eats in a science lab, as this is not allowed.

However, Avtar explained that just like scientists, all cooks try out new ingredients and test their ideas. They then observe and compare the results to see, for example, whether beans cook better with or without salt in the water.



Did You Know...

Avtar was born in Nairobi in Kenya

Scientists Today: Personality Profile

Each week we give our scientist a personality test. This is what we found out about Avtar ... Avtar has a very strong sense of right and wrong and this is why he is careful to only use his science on projects that he believes will make the world a better place for everybody. He is excited by new ideas and loves finding out new things and thinking about the world in new ways. He also likes working with people from lots of different backgrounds and from around the world; which is important in the team he leads.

Activity Sheet 6

Scientists Today



Jiajun (Alice) Fan
Researcher

Our scientist of the week is working to discover ways to turn waste materials, like straw, into useful things.

Scientists Today wanted to know how scientists can do this. Alice explained, “*First, we use microwaves to turn the straw into sugars or oils. Next, we feed these to bugs, and they make useful ingredients for example that are used in sun screen.*”

Alice explained that microwave radiation is very useful. It is not only good at heating your food, but can be used to break down wood, straw, and seaweed through heating them up to high temperatures, where they turn into charcoal, liquids/oil and gas, in a similar way to how coal is made. But rather than taking millions of years this takes a few minutes.

This is an environmentally friendly way to make these very useful ingredients.

Adventurous life in a scientist's spare time

Alice told **Scientists Today** that she has always enjoyed being outdoors. When she was a child she helped her grandad grow vegetables on his farm. She loved climbing trees and was good at climbing high. She also enjoyed catching insects and finding out about them.

Today she enjoys travelling to different countries around the world and loves snorkelling, where she explores underwater worlds and seeing the ocean life hidden beneath the waves.



Scientists Today: Personality Profile

Each week we give our scientist a personality test. This is what we found out about Alice ...

Alice is very curious and is always asking questions. She wants to know how the world is made and always wants to find out more. She is motivated by a strong sense of wanting to help others and to make the world a better place by finding solutions to problems such as pollution. Alice is good at explaining complicated ideas in a way that other people can understand.