

# Rein Angel Inventor

## Focus Questions

1. What did the BTN *Rein Angel Inventor* story explain?
2. Why did Colt invent the Rein Angel?
3. What did Colt discover when he started to talk to other horse riders after his accident?
4. Who did Colt design the Rein Angel for?
5. Briefly describe Colt's invention.
6. How does Colt's invention help to protect riders' hands if their horse takes off suddenly?
7. What is a prototype?
8. What prize did Colt win for his invention?
9. What invention couldn't you do without? Explain why.
10. What did you like about the BTN story?

## Activity

### What do you think?

Students will respond to one or more of the following questions after watching the BTN story:

- What do you THINK about what you saw in the BTN *Rein Angel Inventor* story?
- What does this story make you WONDER?
- Think of three questions you have about the story. Remember that good questions are open-ended (have no right or wrong answer and can't be answered with a 'yes' or 'no').
- What did you learn from the BTN story?

## Activity

### Glossary

Students will brainstorm a list of key words that relate to the BTN *Rein Angel Inventor* story and inventions. Students may want to use pictures and diagrams to illustrate the meaning and create their own glossary. Here are some words to get you started.

Invention	Idea	Innovation
Prototype	Discovery	Science

## Key Learning

Students will learn more about inventions created by young people and design their own invention.

## Curriculum

### Science – Years 5 & 6

Scientific knowledge is used to solve problems and inform personal and community decisions.

With guidance, pose clarifying questions and make predictions about scientific investigations.

Reflect on and suggest improvements to scientific investigations.

### Science – Year 7

Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations.

People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity.



## Activity

### Young Inventors

Students will explore in more detail the winning inventions of the *Little Big Idea* competition. They can investigate all three inventions or choose one to find out more about.

#### Samuel's Hero Helmet

Watch the [short video](#) about Samuel's invention and respond to the following:

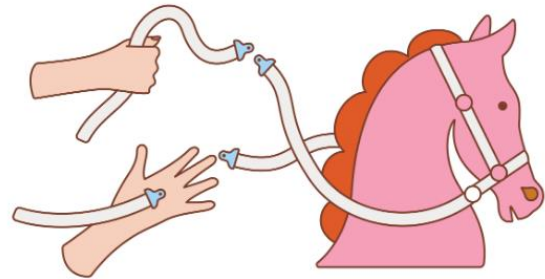
- Briefly describe the invention.
- What inspired Samuel's invention?
- How does it work?
- What materials is it made from?
- What problem does it solve?
- What is unique about the design?
- What questions do you have about the invention?



#### Colt's Rein Angel

Watch the [short video](#) about Colt's invention and respond to the following:

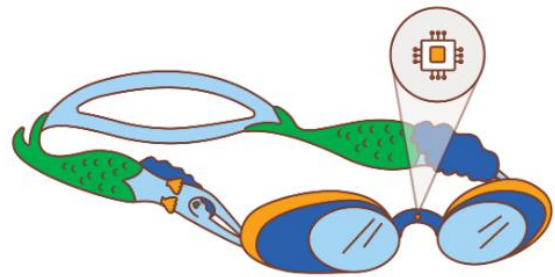
- Briefly describe the invention.
- What inspired Colt's invention?
- How does it work?
- What materials is it made from?
- What problem does it solve?
- What is unique about the design?
- What questions do you have about the invention?



#### Jorja's Smart Goggles

Watch the [short video](#) about Jorja's invention and respond to the following:

- Briefly describe the invention.
- What inspired Jorja's invention?
- How does it work?
- What materials is it made from?
- What problem does it solve?
- What is unique about the design?
- What questions do you have about the invention?



Students can check out the Little BIG Idea finalists in each age group [here](#)  
Do they agree with the judges' decisions? Give reasons why.

## Activity

### Design your own invention

In small groups, students can design their own invention or make a modification to an invention (to improve the design or function of a product). Ask students to respond to the following:

- What are some real-world problems that need to be solved (think of some small and some big)? They could be problems that you have seen or experienced.
- Choose one real-world problem from your list. What could you invent to help solve this problem?
- How does your invention work?
- What materials is it made from?
- What is unique about the design?
- Draw a picture and name your invention.
- What inspired you to create your invention?
- Prepare for and present your invention to the class or wider community.

## Activity

### Kids' inventions

Watch the following BTN stories featuring kids talking about their inventions which help solve real-world problems. Watch the story as a class and students will then respond to the focus questions. There are in-depth teacher resources for each of the stories.

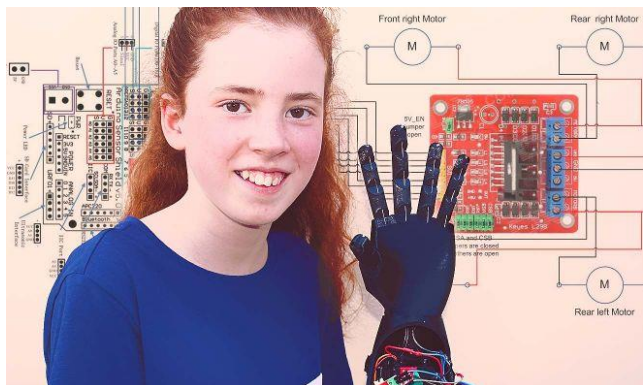
Young STEM Inventor – [Video](#) | [Teacher Resource](#)

1. When did Max get involved in STEMSEL?
2. What does Max do at STEMSEL?
3. Explain what Max's invention BioBin does.
4. The waste put into the BioBin decomposes into...
  - a. Fertiliser
  - b. Methane gas
  - c. Both
5. Methane gas is worse than carbon dioxide. True or false?
6. What inspired Max to invent the BioBin?
7. How is Max helping to fight climate change?
8. Explain the success that Max has had with BioBin.



Bionic Arm Builder – [Video](#) | [Teacher Resource](#)

1. Before watching the BTN story, discuss in pairs what you know about bionics.
2. What helped Hannah build the bionic arm?
  - a. Coding
  - b. Electronics
  - c. 3D design
  - d. All of the above
3. What is bionic technology? Explain using your own words.
4. What can the bionic arm that Hannah built do?
5. Explain how the bionic arm works.
6. What materials did Hannah use to make the bionic arm?
7. What does the fishing wire in the hand act as?
8. How do the sensors on the bionic arm work?



## Useful Websites

Winners & Finalists 2019 – Little Big Ideas

<https://www.littlebigidea.com.au/2019-winners-finalists.html>

Rein Angel – YouTube

<https://youtu.be/SQeDCU82hzM>

Little Big Idea 2017 – BTN

<https://www.abc.net.au/btn/classroom/little-big-idea-2017/10522072>

Young Inventors – BTN

<https://www.abc.net.au/btn/classroom/young-inventors/10523760>

Aussie Inventions – BTN

<https://www.abc.net.au/btn/classroom/aussie-inventions/10531740>