ACTIVITY LOG

STUDENTS ONLY!

WHAT'S YOUR NAME?

LET'S GET STARTED!

WHAT DO YOU WANT TO WORK ON TODAY?

With SAM Labs, the only limit is your imagination.

You can use SAM's wireless blocks and app for exploring your creativity – and for building and programing awesome inventions.

SAM LABS
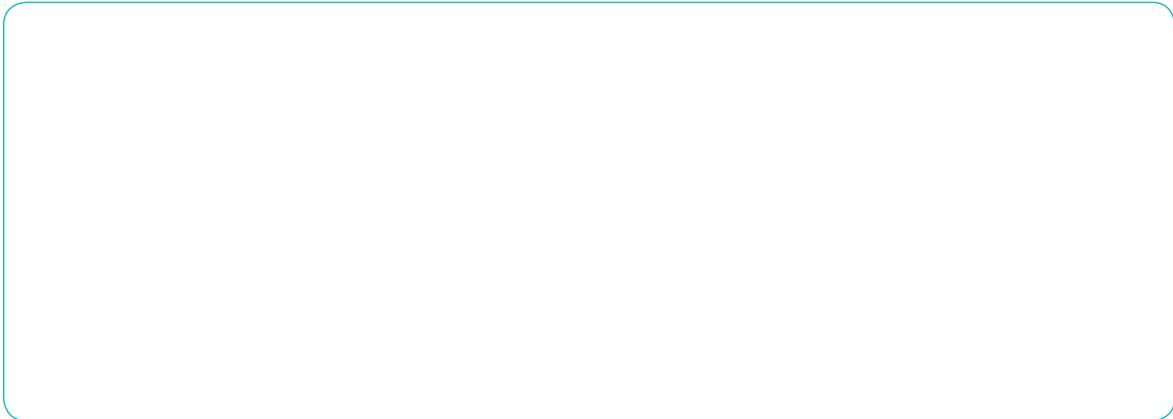*education*

A JOURNEY OF EXPLORATION

Start by turning the blocks on and connecting them using the SAM Space Education app. You should have a fun getting started tutorial in your app, to help you through the basics.

I AM INVENTING:

Now, in as few words as possible, write down what it's function is.

IT WILL:

ADAPTING YOUR IDEA

Let's get a better picture of your idea by mapping it out in more detail.

Here are some things you might like to think about:

- Who will use it?
- In what locations?
- When will it be used?

In the box below, quickly describe an event or circumstance that will be improved by your invention. Writing this down will help other people understand why your invention is important.

E.g. "Sometimes I accidently leave the fridge door open and the ice inside melts – and it runs onto the kitchen floor."

BUILDING A SOLUTION

Now we understand the problem, let's find out what the practical solution is.

In the box below, write down how your invention will enhance the situation.

E.g. "My invention will alert me to the fact that the fridge door is open and remind me to close it. This way, I will not have to clean water up from the kitchen tiles – which is boring."

WHAT PROBLEMS MIGHT ARISE?

During the build, what issues do you anticipate might hold you back from getting your idea off the ground?

For example:

❓ Not having enough time?

❓ Is your idea too complex?

WHAT DOES SUCCESS LOOK LIKE?

Jot down what the required outcome is that'll let you know that your idea has been a 100% success?

How will you measure your achievement?

E.g. "My invention bleeps if the fridge door is left open for more than 10 seconds. This reminds me that I need to go and close it. Thanks to my invention, I no longer have to clean melted ice off the floor."

SAM LABS
education

PIERCING TOGETHER A "PROTOTYPE"

It's time to consider the practical side of building your invention.

Probably the best way to do this is to go back through the SAM app and explore in greater detail what the wireless blocks can do.

With a greater idea of how your invention will look at this early —or 'prototype' stage— spend some time playing with the many functions available. Then write down which ones could help you with your invention:
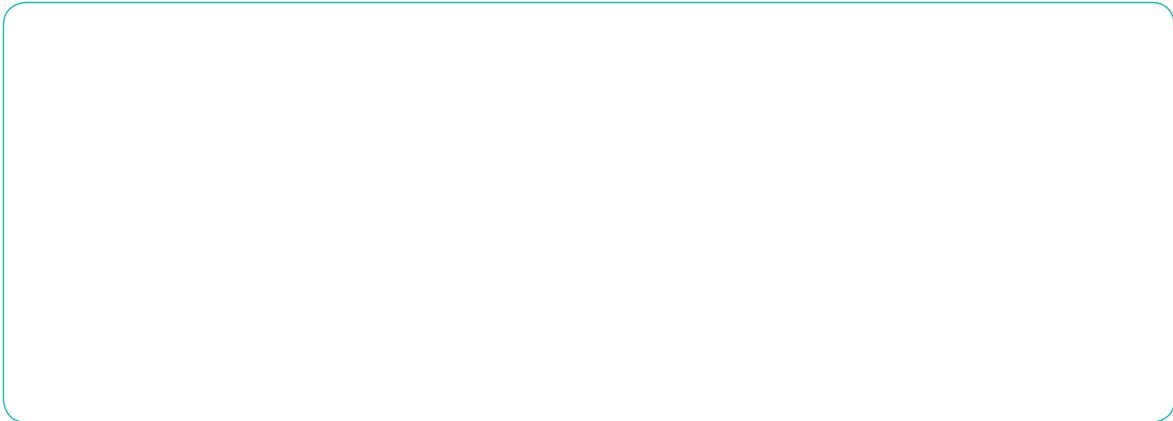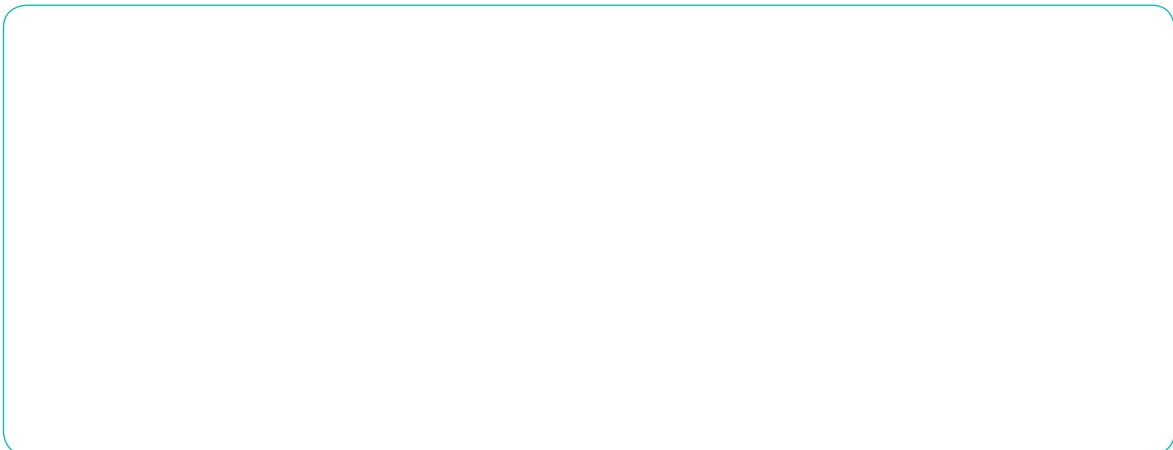
CREATING A "BLUEPRINT"

Hopefully, you'll now have a good idea of how your invention might look — and, crucially, how it will work.

In the following box, draw a diagram of how you would use SAM's wireless blocks to create your invention (make sure you label the blocks you use).

This will serve as the invention's 'blueprint' — a technical drawing showing others how your design works.
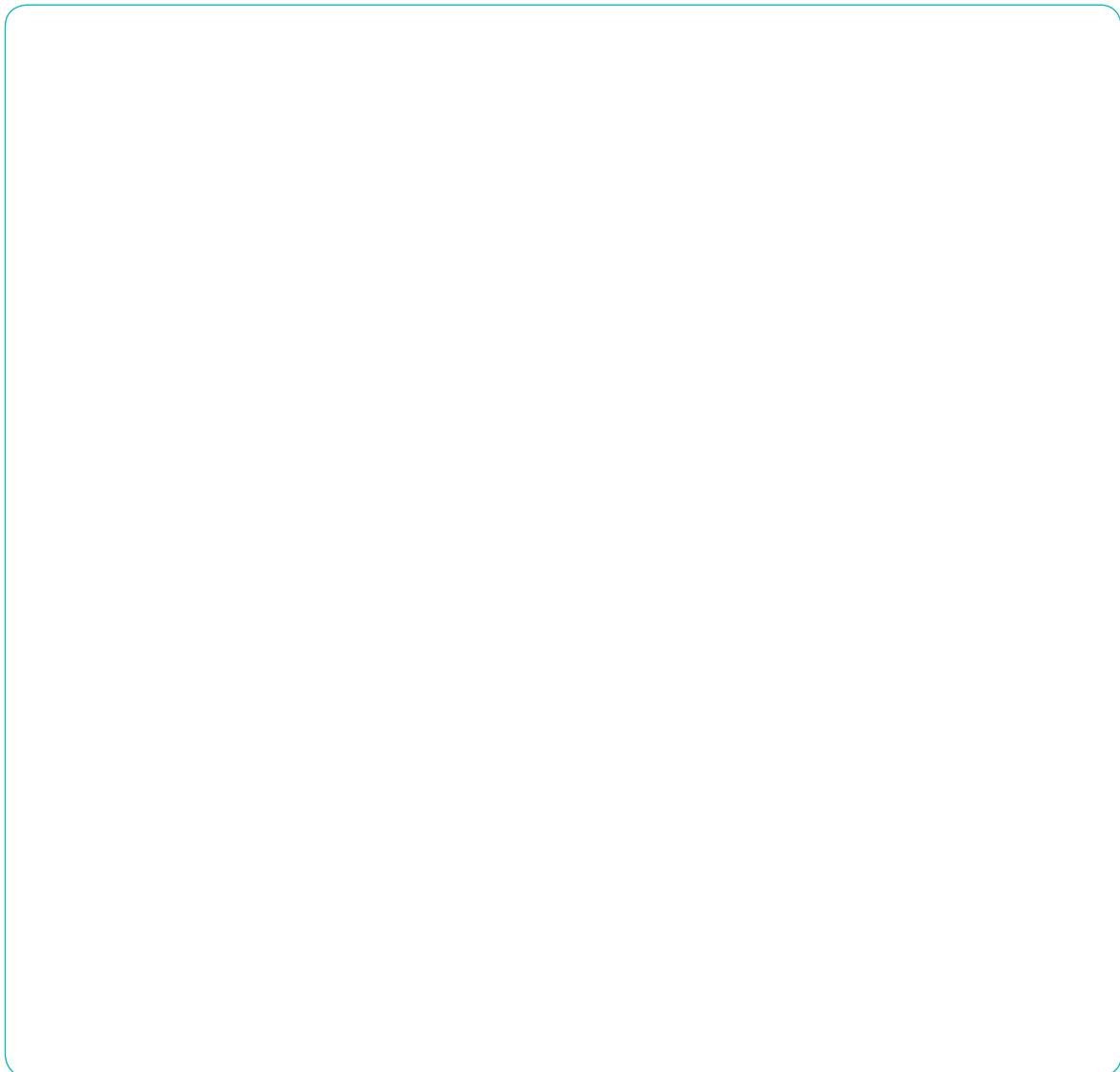
SAM LABS
education

THE BUILD

This is the moment all your hard work has been leading to – it's time to see how good an inventor you are!

USING YOUR BLUEPRINT FOR REFERENCE:
CREATE YOUR INVENTION

If you want to change anything about your approach or design, be sure to jot this down in the following box.

Don't forget to explain why you made the changes.

THE TEST STAGE

One of the most important parts of the inventing process is testing.

Even if an invention looks good 'on paper' – you might discover that, during the build, something was overlooked.

Does your invention work as well as you thought it would? There's no shame if it doesn't – that's what testing is for.

If it doesn't, it may be that there are a few wrinkles to iron out, or that your idea is very complex and requires some more thought.

Whatever the case may be, write down your thoughts after testing in the box below:

KEEP IMPROVING

Very few modern inventions appear overnight!

The technology involved in a Smartphone, for example, is accumulative and based on years of experimentation and invention in several different areas – telecommunications, audio visual systems, GPS navigation, media player technology, etc. It hasn't stopped there either – every year, new and improved Smartphones are developed and released to the market.

Even if your invention has worked exactly as you had originally conceived, the job is not over yet.

Keep experimenting – add new blocks and build on your concept.

Are there things that can be added to your invention to improve the user's experience? Are there other functions it could be used for?

Write down the results of your experiments:

After your continued experimentation, is your invention any better? If so, what do you consider to be the biggest improvement?

If you were starting this process again, would you do anything differently?

ESTABLISHING YOUR IDEA

Now that you're an inventor, it's time to find out what other people think of your creation. Getting honest feedback is a valuable part of the testing process.

You might discover that other people agree with you that your invention is important and useful. (Maybe they'll even wonder how they ever managed without it!)

Alternatively, it might be that they don't really understand the possibilities! You might find that your idea is

too personal, niche or complex?

What's the most important thing you've learned as a result of the invention process?

From initial brainstorming to drawing up the blueprints and building the prototype, right through to problem-solving and redesign, which part of building your SAM invention did you find the most enjoyable?

DON'T STOP THERE!

Now that you have a better idea of what you can do with the awesome power of SAM'S blocks and app,

keep asking yourself: what should you do next?

SAM LABS
education