Glossary of Technological Terms

Attributes: *qualities belonging to a particular thing*

BRIEFS: *these describe a desired technological product. They consist of a conceptual statement and a set of specifications*

a) Given Brief: *Teacher written to guide / model the students through the technological practice*

b) Initial Brief: *This is derived from the given brief. The students record their findings from undertaking planning for practice.*

c) Final Brief: *As the technological process happens, modifications can be or are required to the initial brief due to the stakeholders needs changing, material availability or skills level and access to processes.*

Brief Development: *an on-going process that considers modifications, refinements or developments that should be made.*

Conceptual Statement: *A written description of who will be using the product, what purpose the product is used for, where it will be used and why it will be used.*

Evaluate: *to judge or determine the worth or quality of the product.*

Fitness for purpose: *best solution to meet the need*

Guidelines: *A course of action by which someone is guided.*

Key Factors: *They are the main things that need to be considered when making decisions about how to produce the best outcomes.*

Mock-up: *A scaled model of a structure used for experimental reasons.*

Planning for Practice: *Identifying the key factors and key stages to develop an outcome including: possible solutions, existing ideas, materials to use, skills and knowledge needed etc.*

Prototype: *a full scale operational model that includes all components of a final brief. It can be used to see the physical and functional natures of the outcome and to evaluate its fitness for purpose.*

Outcome: *the product of some technological practice. May include plans, models, sketches etc.*

Outcome Development: *the trailing and production part of technological practice.*

Specifications: *a list of key requirements of the intended outcome to guide the development and will be used as a measure during the final evaluation.*

Stakeholders: *a person or group having a stake, or interest, in the success of a product.*

Technological outcome: *a fully realized product or system to meet a need or opportunity.*

What's Happening At Heaton?

Students are given the opportunity to become familiar with the new approach to Technology. In this cycle of Technology, students have eight 1½ hour sessions. The first four sessions will operate on a rotation basis where each student will be introduced to Brief Development; Planning for Practice; Outcomes & Evaluation and The Nature of Technology through an interactive approach. During this time, classroom teachers and Technology teachers will be encouraging students to consider possible ideas to create an "Invention". The students will be thinking about a product they see could be modified or developed to meet a need.

Students will complete "action plans" prior to the next set of sessions. This will ensure, they and their teachers are aware of the key factors and processes involved in developing their invention.

During sessions 5-8, the students will be allocated a Technology room that best suits their needs to develop their invention. Students will follow a similar learning path to the example given of Fred's track bag. A display of the outcomes will be organized for later in the term.

Students - visit www.techlink.org.nz to see a student showcase of lots of exciting ideas of technological practice by students just like you.

Parents - visit www.techlink.org.nz to view a webpage informing parents about technology education. We are also distributing a brochure entitled "Technology Education" developed by Techlink. Although it's audience is essentially secondary education, it will assist parents in understanding the direction of technology.

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Heaton Normal Intermediate School

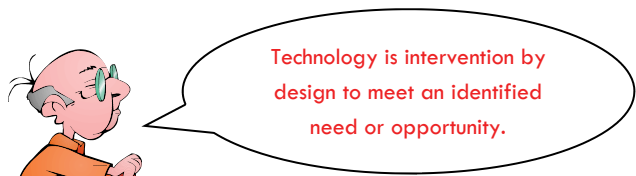Brochure created by Lynne Topham

Heaton Normal Intermediate School

TECHNOLOGY EDUCATION

Looking to the Future

Technology is intervention by design to meet an identified need or opportunity.

Trust ol Smithels to make the simplest thing sound complicated! Wow! That statement sure needs some unpacking! Hi I'm Sam. You'll remember my buddy Joe.

Hi there guys! Sam and I are going to lead you through understanding a bit more of what **Technology** is all about, cus recently it has kinda changed a bit.

To begin with both Joe and I are mini-technologists. You see, we're constantly using all sorts of products and systems everyday - just like you. Sometimes we think "If only this had a …. or it could …. or if I changed …". I bet you think like that too. Well, see that's what a Technologist is - where someone like you is involved in the designing and the decisions that might end up being a new development or modification to a product or system.

So… when we talk about Technology, it just means that someone might choose to design something to meet a need someone has or they see an opportunity to create something new.

So, as Technologists in training, our teacher gives us a "*Given Brief*". This is where the teacher identifies a need or sees an opportunity. The teacher also thinks about the physical and social environment when establishing the given brief. Joe and I will need to consider this too as we work.

"*Brief Development*" will happen as we plan, model, test and trial, and make decisions about our ideas.

Joe and I start to do some thinking about this brief. Our teacher calls this "*Planning for Practice*". We talk about the *key factors* and *key stages* that will be important when developing the outcome. We do this by exploring and analyzing the need or opportunity driving the project. It includes investigating:
why has this brief been established, what is to be done, how it could be done, who is the outcome for, what skills and knowledge will we need, etc.
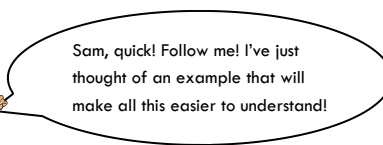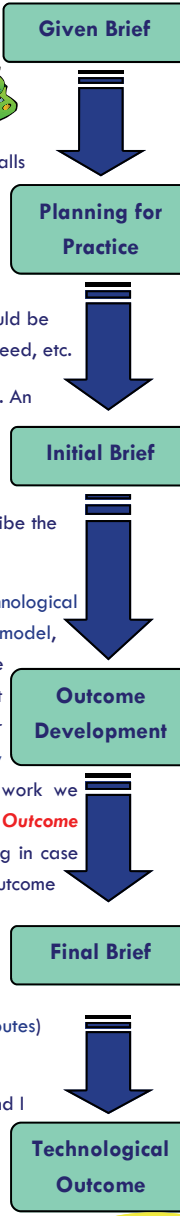
Now Joe and I form an "*Initial Brief*" from our new understandings. An initial brief has two parts to it: * the first part is the "*Conceptual Statement*". A conceptual statement will explain what Joe and I are developing and why we are developing it.
* the second part are the "*Specifications*". This is where we describe the key *attributes* and *guidelines* for the *technological outcome*.

YES! We're into it! Joe and I start working on developing the technological outcome. We survey, investigate existing ideas, sketch our model, investigate which materials will be best to use, decide on the skills and knowledge we will need and consider what our budget and timeframes are. We need to keep meeting with our *stakeholders* to ensure we are on the same wavelength. We may create a model of the outcome for the stakeholder. As we work we model, trial and test ideas, draw and plan as part of our *Outcome Development*. All the time we will *evaluate* our work and thinking in case we need to modify our specifications to make the best final outcome we can.

Our planning for practice and outcome development and evaluation will help Joe and I to develop a "*Final Brief*". This brief includes the conceptual statement and specifications (all key attributes) needed to create the outcome.

O.K. Now we create our *prototype*. Once this is completed, Joe and I need to check its *fitness for purpose*. We check back with our final brief and decide if everything included in the brief is part of the prototype. We meet with our stakeholder and present the prototype.

Given Brief

Planning for Practice

Initial Brief

Outcome Development

Final Brief

Technological Outcome

Wait for me Joe!

Sam, quick! Follow me! I've just thought of an example that will make all this easier to understand!

Fred has been asked to represent Heaton Normal Intermediate School at the South Island Athletics Champs. He needs a bag for trackside when he is competing.

To make the trackside bag, Fred needs to consider a design that would be best fit as well as consider what his trackside bag would need to carry. The bag would need to be relatively waterproof and easily identifiable.

Produce a trackside bag that is suitable for a running competitor, that will carry energy food, clothing and a towel, is easily identified, a suitable size to be carried between events and be relatively waterproof.

Fred sketched some ideas and decided to make three compartments to store the different items in a bag he could carry on his back. He then made some more detailed sketches that included measurements. He decided to work with fluoro coloured water resistant material.

From the detailed drawings and measurements Fred made a full scale *mock-up* out of calico to test the functionality of his design. After his testing, he found the domes he had used to close the compartments were not closing easily and the shoulder straps would require further padding for comfort.

Fred formed his final brief. "Produce a trackside bag that is suitable for a running competitor, that can comfortably be carried on his back, is easily identified, relatively waterproof and has closing compartments that will carry energy food, clothing and a towel.

Fred made the prototype from fluoro water resistant material. He *evaluated* its fitness for purpose against the specifications in the final brief. He is competing on Monday and looking forward to using his track bag.

Given Brief

Planning for Practice

Initial Brief

Planning for Practice & Outcome Development

Final Brief

Technological Outcome

Hi 5 Joe!