

Tips when writing Criteria (Specifications) for the PP

What is Criteria?

Think of 'criteria' as statements that describe the attributes you want your completed project to have. In Design class you will be familiar with the term 'specifications', well specifications are really the same as criteria.

Your criteria should be a condensed collection of the most important information from your research. Ensure your criteria reflect your research, and don't forget to cite the sources where you found the information! Write concise statements that are to the point.

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You should have between 7-15 specifications, based on themes such as:

Function (what your end product should do and how it should do it), **Aesthetics** (the way you want your end product to look) , **Safety** (would be really important if you are creating a vehicle, toy or food), **Size** (could be the maximum or minimum size for your product), **Resources** (materials and equipment limitations), **Cost** (what's your budget?), **Environmental Location** (weather, style, indoors/outdoors), **Quality** (rough prototype vs professional looking product), **Durability**, and **Time** (when is my deadline).

Depending on the context of the project, some of the above themes may or may not be relevant, and some may be more important than others. Can you think of any relevant themes for criteria if you were creating a performance, or writing a book?

It is good practice to place your criteria in order of priority. Remember, the priority of your criteria will change depending on the context of the project.

Ensure that each criteria is **SMART**:

Specific – Measurable – Attainable – Relevant - Time-Bound

If you are designing something for your PP be careful not to write criteria that describe exactly how your solution will look or function, as this won't give you much chance to be innovative or creative during the design stages of the project.

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Here are some examples of **well written**, and **not so well** written criteria.

Function

When describing the function of your end product **never** write things like:

- It must work well
- It must function correctly

These statements don't state specifically what you want your end product to do. The criteria should explain what you want your end product to do, though not specifically how to do it, as this may stifle innovation and creativity.

Write what you want your end product to do. For example:

- Tell the story of how my grandparents escaped Nazi Germany in 1937 and made a new life in the USA.
- Educate people between the age of 13-113 how to reduce cholesterol
- Reduce neck ache when using a smartphone
- Store my jewelry collection (list the specific types of jewelry and quantity) 10 rings, 5 bracelets and 10 pendants.
- Show people how to cook my favorite 10 recipes, which have been handed down through 5 generations of my family.
- My painting must hang on the wall, so I must incorporate a means for hanging
- My sculpture must be freestanding, so must have a wide base to make it stable
- My light must be able to adjust for height and reach

Aesthetics

When describing how you want your end product to look never write things like this:

- My painting must look nice
- My storage device must look good
- My display must look attractive

These statements mean very little. **You should write criteria like this:**

- My painting must harmonize with the room's aesthetics; so neutral colors would be best to use
- My sculpture must contrast with the furnishings of the room; so bright colors such as red, yellow and orange would work really well.
- My display must appeal to my target audience; whose favorite colors are hot pink and deep purple.
- My cookbook must use colors and images that evoke the French culture, so the colors of the French flag - red, white and blue should be incorporated, and famous iconic images such as the Eiffel Tower, Arc de Triomphe.....
- My performance piece must use calm rhythm and movement to tell the story of courage

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Measurements

If you don't have a measurement when describing the dimensions, then you may have forgotten some important research; particularly if you are storing or displaying a specific object.

When writing about dimensions **never write the following:**

- My storage device must be the right size.
- My display device must display a photograph.
- The space where my storage device will go is small, so I will need to make my device small.
- My jewelry stand must be tall enough to hold my longest pendant.

These statements don't have any numerical measurements. **You must write statements like this:**

- My storage device must be able to hold 20 pencils that are 170mm long and 8mm in diameter.
- My display device must display a photograph which is 9"x 6".
- The space where my storage device will go is 360mm x 220mm.
- My jewelry stand must be tall enough to hold my longest pendant which is 525mm long, 55mm wide,
and 15mm deep.

Time

If you don't have a specific date for this criteria, or even better how many hours you have to create your end product, it is most likely wrong. **Avoid using statements like this:**

- My end product must be completed by the time specified.
- My end product must be completed in time.
- I must make my clock quickly.

As you can see there is no actual date specified for any of these statements. **Try to write statements like this:**

- My end product must be completed by the 27th of September.
- I have given myself 2 weeks to make my product, which equates to 6 hours. This isn't much time, so my design must be very simple. I must finish by March 12rd.

Both these statements have dates, and the last one even has how many hours you have to make your device.

Materials

When specifying the materials, the best thing to do is to state the appropriate properties the materials must have for your device to function correctly, and be visually appealing. So you should write statements like this:

- I must use materials, which will be strong and durable enough to survive normal everyday use.
- I must use materials, which will survive being outside all year round (environmental conditions).
So the materials must be water resistant.
- I must use materials, which, will be appropriate for their aesthetic and environmental location.
- I must use materials that require little or no maintenance.
- I must use materials, which are easy to clean.

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- I must use materials, which will withstand an impact.
- I must use materials, which are scratch resistant.
- I must use materials, which are environmentally friendly. Therefore, I will use....
- I must use materials, which are nontoxic (Particularly important for babies and toddlers who put things in their mouths or for anything used around food).
- I must use recycled materials.

You should also give suggestions as to the **specific materials** that have these properties.

- I must use materials, which will withstand an impact, such as ABS.
- I must use materials, which are colorful and reflect light, as these will be eye catching, and attract people's attention. Suitable materials could be acrylic, which school has in red, yellow, white, orange, and violet.

Safety

Safety can be very important when designing things for very small children. It can also be important for adults too; think of all the safety features that your family car has?

When writing criteria about safety, **never write:**

- My toy train must be safe.
- My toy must conform to federal safety codes TS-175.
- My solution must not hurt anyone.

These statements don't give any specific details about how you must make your solution safe. This demonstrates that you have not completed any research on safety! Your specifications must reflect the facts you gathered about safety during your research.

Try to write statements like this:

- I must not carry out any electrical work unless the voltage is less than 18v, as working with voltages higher could be fatale!
- My toy must not have any parts smaller than a quarter, which an infant could swallow.
- My device must be made from nontoxic materials such as
- My device must not injure the user in any way, so it must have no sharp edges or corners.
- My toy must conform to Federal toy safety standard TS-175 which states the following:
Materials must be
Parts must be
If there are any
Paint must

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