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| **HOLD THAT CUTLERY!** (draft)  **CRITERIA:** Make a structure that can support at least 5 spoons, 5 forks, 5 knives UPRIGHT for use in an outdoor setting like a picnic or outdoor barbeque. It must be stable enough. It must be strong enough.  STABILITY: The ability of a structure to maintain (keep) its shape and position (not collapse or fall over or lean over)  STRENGTH: the ability of a structure to support a load (forces).  I realize that we are not yet done exploring these topics. That is okay. The marks come from your ability to improve your design as you learn these ideas and also your ability to communicate the strengths and weaknesses of your design.  This is your prototype.  **MATERIALS ALLOWED:** only newspaper is allowed. No more than 5 Free-Press sized newspapers are allowed (approximately 200 full-sized sheets); masking tape only  **ITEMS TO THINK ABOUT WHEN MAKING YOUR FIRST DESIGN**  I realize that we are not yet done exploring these topics. That is okay. The marks come from your ability to improve your design as you learn these ideas and also your ability to communicate the strengths and weaknesses of your design. |
| 1. what is the FUNCTION (purpose/job) of your design?   (ie is it meant to support, transport, contain (hold), shelter, lift, separate, fasten,  break?....) |
| b)      Identify what internal forces (tension, compression, torsion, shear) act upon it |
| c)      What gives it its strength (corrugation, lamination, triangles, struts, curves). |
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| d) What gives it stability (centre of gravity, support base, tapering) |
| e)      Any signs of structural stress? Structural fatigue? structural failure? |
| f)       One improvement to the structure. The improvement could relate to |
| \*alleviating the internal forces you identified in a) |
| \*alleviating the external forces you identified in b) |
| \*an alternate material |
| \*an alternate way of joining the parts |