**Balsa Bridge Rubric Physics 2015-2016**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Category** |  |  | **Points Received** |  |  | **Points Possible** |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | **Design** |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | Bridge meets construction requirements |  |  |  |  |  |  |  |
|  | o wide enough to allow car to pass |  |  |  | 5 |  |  |
|  | o | allows car to roll across |  |  |  |
|  |  |  |  |  |  |  |  |
|  | o long enough to rest on support structures for testing |  |  |  |  |  |  |  |
|  | Creativity |  |  |  | 5 |  |  |
|  | o | bridge has unique characteristics or is an original design |  |  |  |
|  |  |  |  |  |  |  |  |
|  | Quality of craftsmanship |  |  |  |  |  |  |  |
|  | o | wood cut to appropriate length |  | 5 |  |  |
|  | o limited glue used at joints |  |  |  |  |  |  |  |
|  | **Report** |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | Neat and detailed drawing of bridge |  |  |  |  |  |  |  |
|  | o drawn on graph paper |  |  |  |  |  |  |  |
|  | o | all dimensions clearly labeled |  | 10 |  |  |
|  | o use of straight edge |  |  |  |  |  |  |  |
|  | o | drawn to scale |  |  |  |  |  |  |  |
|  | Organized recording of necessary data |  |  |  |  |  |  |  |
|  | o | mass of bridge |  | 2 |  |  |
|  | o mass held before breaking |  |  |  |  |  |  |  |
|  | Calculation of force applied to bridge |  | 5 |  |  |
|  |  |  |  |  |  |
|  | Calculation of bridge efficiency (strength-to-weight ratio) |  |  |  | 5 |  |  |
|  |  |  |  |  |  |  |  |  |
|  | **Group Participation** |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | All group members worked cooperatively to produce bridge and |  |  |  | 3 |  |  |
|  | report |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  | Bridge and report completed on time |  |  |  |  |  |  |  |
|  | o effective use of class time |  |  |  | 10 |  |  |
|  | o | research completed before construction began |  |  |  |
|  |  |  |  |  |  |  |  |
|  | o work completed outside of class if necessary |  |  |  |  |  |  |  |
|  | **TOTAL** |  |  |  |  |  | **50** |  |  |
|  |  |  |  |  |  |  |  |  |  |  |