**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** | |  |  |
|  |  |  |  |  |  |  |  |  |  |  |