**GEOTRICITY SUMMATIVE**

**INTRO:**

**You will get to view the space during our community walk. Consider what you would love to have in your neighbourhood, what would benefit the community, and what would contribute to an inviting space that will bring the community together. You will need to explain why you think your project is the best possible use of space, so make sure you choose something that you believe in!**

**PHASE 1: Brainstorm and Site Visit**

Take time to come up with as many ideas as you possibly can. When you have a few top ideas begin sketching out your plan and thinking about the specific details. When you’ve narrowed down your plan to one or two top picks, start to use the following questions to help focus your thinking and come up with a main idea:

* What does your plan need? Consider the infrastructure (under the surface and behind the scenes systems that will make your plan work). Think about cost, long term maintenance and support, etc.
* What will make the community excited and engaged in your project? Do you already know about something your neighbours would like to have? Have you seen something in another neighbourhood that you know your community will love?
* How will you sell this to your peers and their families? What makes this idea great?
* What sets your idea apart from any other potential plans? If someone else has a similar concept, what will make yours the best possible choice?

During the brainstorm process all groups will have the opportunity to go outside and see the space in person. You will also be asked to take a series of measurements that will help you to create a scale model of the project area. You will take measurements, decide on a reasonable scale and then construct a triangle on graph paper using your scale. You must submit your scale triangle along with your final design to the teachers to receive your cardboard base and the materials to build your model.

**PHASE 2:** **Create a final design including measurements, have your design approved**

Once your group has settled on a finalized design, you will need to create a sketch on graph paper that includes ALL of the measurements that you will use to build your scale model. Start by considering the actual size of the space, decide on the size of your project, then scale the measurements down using the scale you’ve used to create your triangle. Along with your detailed design diagram, you will be asked for a list of desired building materials (3 must have, 3 nice to have, and any others you hope to include). Label these materials on your diagram so we can see how they will be used. Remember that we are on a very tight timeline, so your model needs to be something you can complete in a few hours! Bring your completed design to the teachers, you must get it signed before you can start to collect your building materials.

**PHASE 3: Construct your scale model**

Actually build a model of your project using the scale and measurements that you had approved by staff. Your models will be viewed by staff, students and community judges, so remember that presentation is important – make it something you’ll be proud to show off. Keep in mind we are on a tight timeline and use your time effectively!

**PHASE 4: Present your model to a panel of judges, staff and students**

On the final afternoon of the project we will share our projects with everyone here at Robert Service as well as judges from the community and families and friends from our neighbourhood. People will be asked to vote for their favourite designs, so be prepared to be enthusiastic and share your plan in a way that will make people excited to support your project.

**GEOTRICITY PROJECT PLANNER**

**TEAM MEMBERS:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***PHASE 1: BRAINSTORM AND SITE VISIT:***

***GUIDING QUESTIONS:***

* What are some possible uses of the space?
* What does your community need/want? What will make the community excited and engaged in your project? Do you already know about something your neighbours would like to have? Have you seen something in another neighbourhood that you know your community will love?
* What does your planned use of space need? Consider the infrastructure (under the surface and behind the scenes systems that will make your plan work). Think about cost to build and maintain, types of long term maintenance and support it will need, safety, etc.
* How will you sell this to your peers and their families? What makes this idea great?
* What sets your idea apart from any other potential plans? If someone else has a similar concept, what will make yours the best possible choice?

***SITE VISIT ORGANIZER:***

DESCRIBE HOW YOU HAVE DETERMINED ALL SIDE LENGTHS AND ANGLES DURING YOUR SITE VISIT. BE SPECFIC!

DRAW A SKETCH OF THE AREA TO HELP YOU KEEP TRACK OF THE ANGLES AND SIDES OF THE SPACE

PROPOSED SCALE AND CALCULATIONS:

***PHASE 2: FINAL DESIGN:***

DESCRIBE YOUR PROPOSED PROJECT, AND GIVE 3 REASONS WHY YOU BELIEVE THIS IS THE BEST PLAN FOR THE SPACE. USE ADDITIONAL PAPER IF NECESSARY:

LIST 3 POSSIBLE PROBLEMS PEOPLE MIGHT HAVE WITH THE DESIGN/PROJECT YOU HAVE CHOSEN. HOW WILL YOU RESPOND TO THESE PROBLEMS – EXPLAIN. USE ADDITIONAL PAPER IF NECESSARY:



WHAT SCALE HAVE YOU CHOSEN TO USE? WHY IS THIS THE MOST LOGICAL CHOICE?

WHAT 3 MATERIALS ARE YOUR “MUST-HAVE” ITEMS FOR BUILDING YOUR SCALE MODEL?



WHAT 3 MATERIALS ARE YOUR “NICE-TO-HAVE” ITEMS FOR BUILDING YOUR SCALE MODEL?



WHAT OTHER MATERIALS DO YOU PLAN TO USE TO BUILD YOUR SCALE MODEL?

PLEASE REMEMBER TO LABEL ALL MATERIALS ON YOUR DIAGRAM!!!!

WHEN YOU HAVE COMPLETED ALL PARTS OF THIS PLANNER, BRING IT TO A TEACHER ALONG WITH YOUR SCALE TRIANGLE AND YOUR COMPLETED DESIGN DRAWING FOR APPROVAL.

TEACHER APPROVAL: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

GEOTRICITY PROJECT SUCCESS CRITERIA

TEAM NAMES:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A successful project will:

* Include correct measurements of the sides and angles anywhere that they are used (planner, diagram, model)
* Scale triangle with correct angles and side lengths has been submitted
* Well thought out design plan that uses the space in a way that will benefit the community
* Carefully constructed design diagram with all measurements and angles correct and to scale
* Clear justification of the selected design that fully explains the benefits and possible drawbacks of the project you have chosen
* Carefully constructed model built with precision and accurate measurements and angles

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| --- | --- | --- | --- | --- | --- | --- | --- |
| CATEGORY | CRITERIA | EX | 4 | 3 | 2 | 1 | R |
| MEASUREMENTS OF SPACE | Measuring tools have been used correctly  All side lengths and angles are measured correctly  Process for determining side lengths and angles is fully  explained, mathematically correct | 10 | 4  4  8 | 3  3  7 | 2  2  6 | 1  1  5 | 0  0  3 |
| CREATION OF SCALE TRIANGLE | A reasonable scale has been selected  Scale calculation steps have been applied correctly  Scale calculations are correct  Triangle has been constructed accurately  Triangle measurements and angles are correct |  | 6  4  4  4  4 | 5  3  3  3  3 | 4  2  2  2  2 | 3  1  1  1  1 | 0  0  0  0  0 |
| FINAL DESIGN DIAGRAM | Diagram has been constructed with care  Measurements are accurate  Angles are accurate  Appropriate level of detail included | 5  5 | 4  4  4  4 | 3  3  3  3 | 2  2  2  2 | 1  1  1  1 | 0  0  0  0 |
| FINAL DESIGN PLANNER | Design is thoroughly described  Reasons/justification of selected design are logical  Potential problems and proposed solutions are well  well-explained and thoughtful  Justification of scale makes sense, well explained  Thoughtful selection of materials | 5  5  5  5  5 | 4  4  4  4  4 | 3  3  3  3  3 | 2  2  2  2  2 | 1  1  1  1  1 | 0  0  0  0  0 |
| SCALE MODEL OF PROJECT | Model is constructed precisely and to scale  All measurements and angles are correct  Materials have been used appropriately and with care  Presentation of completed project is well planned, fully  explained and reflects thought | 5 | 4  4  4  4 | 3  3  3  3 | 2  2  2  2 | 1  1  1  1 | 0  0  0  0 |
| TOTAL MARK (OUT OF 100) | |  |  |  |  |  |  |

COMMENTS: