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| **City Challenge Report Card** |
| **The City Challenge Theme** | **3- Urban Regeneration to Connect People in a Healthy Environment** |
| **School/Summer School** | St. Mary’s High School | **Teacher(s) / Disciplines** | Sam Moore/ Science and Geography  |
| **The planning phase** | Problem (The What-question) | Our hypothesis is to examine the water of our local stream to see if the water is of a good, moderate, or poor standard. |
| Relevance(The Why question) | The site we chose was the Baby’s Walk in Midleton, Co. Cork. It is situated near a World War 1 monument, and in close proximity to the famous Jameson Distillery. The body of water running through the area is named the Dungourney River. The GIS location of the site is 51.91247,8.17046. We chose the Baby’s Walk due to it being only a 2-to-3-minute walk from our school, St. Mary's Highschool Midleton. It is also a point of interest for all students as it is a local stream. |
| Expectation / Hypothesis | We expect the results to be poor to moderate. |
| Methods (The How-question[[1]](#footnote-1)) | Take three kick samples from different sections of the stream and to use testing strips to test the phosphorus, nitrate, and nitrite levels in the water as severely high levels of these compounds can impact the overall ecological health of the river.  |
| Participants[[2]](#footnote-2)(The Who- question) | 30 Transition Year Students, and local community water quality experts. |
| **The implementation phase[[3]](#footnote-3)** | Activity 1(e.g. literature, book review) | Prior to conducting the investigation, we discussed our targets and the methods we hoped to use to collect the data in the classroom. We decided that our aim would be to test the Dungourney river to check the quality of its water. We also attended a zoom call with three PULCHRA leaders who taught us how to go about our data collection.  |
| Activity 2(e.g. gather data / information) | Firstly, we examined the aquatic invertebrates to see if the quality of the river water was good or bad. We conducted 30-second kick-samples in three separate shallow, gravelly, fast-flowing sections of the stream. OnceFirstly, we examined the aquatic invertebrates to see if the quality of the river water was good or bad.  |
| Activity 3 | The pH test strips were then used to establish the levels of nitrate, nitrite and phosphorous in the water. The three sections of the stream used for the kick sampling were tested using these pH strips. The results were also recorded.  |
| Activity 4 | To raise awareness about our study and keeping local water bodies healthy, we planned a number of activities. We 1) made art work to hang around the school with information about water quality, 2) organised a litter pick up around the stream, and 3) made a bottle cap donation box to reduce plastic waste on our school grounds |
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| City Challenge solution | Campaign to raise awareness about river water quality protection.  |
| **The documentation and reporting phase** | Group or class (e.g. reports, posters etc) | Student written articles for the Pulchra Blog, art work, posters. |
| School (e.g. school web page, school newspaper) | School webpage. |
| Public(e.g. meeting, news media) | None, time did not allow for us to join the PULCHRA Ireland event. |

**Room for additional explanations (some feedback on main problems found and related solutions and on project inclusion in teaching. Other comments are welcome. )**

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1. Please provide the keywords regarding both, the teaching approach and the research approach [↑](#footnote-ref-1)
2. E.g. the science team members [↑](#footnote-ref-2)
3. Please provide support if possible through pictures, sketches, charts, student reflection or such [↑](#footnote-ref-3)