

Evans Bay Intermediate School

SCHOOLWIDE ACHIEVEMENT REPORT

TECHNOLOGY

December 2009

INTRODUCTION

This report provides a picture of student achievement across the school in the area of Technology.

With whole staff professional development this year, an exciting thing to see in the Technology area is the use of reading assessment data to determine support that students receive in the technology programme. This has enabled students to have more success in their learning in this area.

This report is broken into three parts each being a different Technology programme delivered to students at Evans Bay Intermediate School.

1. **Materials Technology** (Molly Munro & Alice Barnes)

All students were assessed according to the Level 1 – 4 achievement objectives in the New Zealand Technology Curriculum document. These achievement objectives were met through students making one of the following:

The students research, design, sample and make a project set by a brief.

- ✓ Designer Bags
- ✓ Boxer shorts
- ✓ Creative cushions
- ✓ Felted creatures

2. **Foods Technology** (Maryan Coleman)

All Year 8 students were assessed according to four levels (1 – 4) determined by the teacher. These are not levels of the NZCF. The data compiled was based on student ability in practical skills.

3. **Hard Materials** (Kelvin Fah)

Students were assessed according to the NZC Levels 1 - 4. The objectives were from the Strand- Technological Practice and it was the Brief Development Objective. These objectives were met through students planning and designs for a CO2 Racer. Students had to present all stages of the design process from initial concept through refinement to a full scale working drawing which students used as the plans for their practical constructions.

DATA ANALYSIS

Materials Technology (Molly Munro)

Students are expected to be working at Level 4 on the framework. It needs to be noted that in determining any levels, they are *teacher best fit levels. (Overall Teacher Judgements)*

The achievement objectives in each level are as follows:

Level 1

With reference to identified and needs opportunities, students can identify and gather necessary resources and model or make referred solution.

Level 2

With reference to identified and needs opportunities, students can identify and gather necessary resources and model or make their preferred solution.

Level 3

With reference to identified and needs opportunities, students can prepare a plan of action, identify and collect the required resources and produce the selected solution to meet agreed or specified criteria.

Level 4

With reference to identified and needs opportunities, students can prepare a plan of action, identifying the required resources to produce the selected solution to meet agreed or specified criteria.

The students were assessed and graded on their design skills, final product and evaluation. However it is the above, which is taken from the NZ Technology Curriculum, which they were, assessed and graded on for reporting.

Examples of Techniques and Process

Drawing and designing

Testing flammability, strength and durability of fabrics

Threading and sewing on the sewing machines safely and accurately

Following the design process and instructions

Foods Technology (Maryan Coleman)

All students were assessed on practical skills. ie Techniques and processes taught and used this year in foods. The levels that they were assessed against were based on set criteria set by the teacher, not levels of the NZCF.

Criteria Level 1

Significant support needed and not yet working independently.

Criteria Level 2

Some support needed. Beginning to do some independent work.

Criteria Level 3

Using most practical techniques and processes taught. Significant amount of independent work completed.

Criteria Level 4

Working independently and confidently while using practical processes and techniques taught.

The assessment for this unit was done formatively. This means that assessing students was done throughout the unit through anecdotal observations by the teacher and also self assessment by students. In the last three lessons the placing of students at various levels, was finalized. The teacher expectation is that most students should be either achieving a 3 or 4 at completion of the unit.

Examples of the techniques and processes that students learn are:

Kneading dough.

Using knives safely and correctly.

Rubbing butter into flour.

Handling and rolling out dough.

Creaming butter and sugar.

Using a variety of different kitchen equipment safely and correctly.

Making a roux sauce.

Using a variety of safety procedures

Use of hygiene practices

Knowledge of nutrition

Structures and Mechanisms (Kelvin Fah)

All students were assessed against the objectives from the Curriculum Framework. They were assessed on their planning and design development. Students then developed their chosen design, but this was not part of the formal assessment.

Assessment was completed formatively and through student self evaluation. Students modified their designs during construction process and these modifications were considered when giving students a best fit level.

Level 1

Students had to be able to describe the outcome they were developing and they needed to be able to identify the attributes that it should have.

Level 2

Students had to explain the outcome that they were developing and the attributes that it should have.

Level 3

Students had to describe the nature of an intended outcome, explaining how it addresses a need or opportunity. They needed to be able to describe the key attributes that enable development.

Level 4

Students had to justify the nature of an intended outcome in relation to a need or opportunity. They had to be able to describe the key attributes identified which will inform the development outcome.

STRENGTHS

Materials Technology

The two groups that stand out as achieving to the highest level in this area of Technology are the Year 8 Maori and the Year 8 Pacific students.

100% of year 8 Pacific Students achieved a Level 3 or 4. 97% of year 8 Maori Students achieved at this level.

Foods Technology

Year 8 students achieved to a higher level than Year 7 students.

Female students are achieving better than Male students, both at Year 7 and at Year 8.

68% of Year 8 students achieved a Criteria Level 3 or better compared to 41% of Year 7 students. This is what we would expect as they have got more prior knowledge than the Year 7 students.

Year 8 Female students were the highest achieving group. 80% achieved a Criteria Level 3

Hard Materials

The Year 8 students achieved better than the Year 7 students.

Year 8 Females are the highest achieving student group with 61% achieving a Level 3 or better.

With the value added to student learning between year 7 and Year 8, it is very pleasing to see that this is reflected in the results.

TARGETS

Materials Technology

Because it is new 'technical skills' and projects that the students are learning in Year 7 and 8, there is not expected to be a major difference in the levels between Year 7 and 8.

However with the formative assessment of students on their design, investigation and evaluation skills work, there is a significant improvement in Year 8. This would be expected, as this is an area that they worked on in the previous year.

In 2010 the students will be focusing on new practical skilled units. Again I would like to see the Year 8's with a significant improvement in the formative assessment with their design, investigation and evaluation skills.

Foods Technology

Overall Foods Technology is an area where the Year 8 students are achieving better than Year 7 students.

Of the Year 8 cohort, Pacific students are not achieving as well as other groups.

Males students are achieving at a lower level. Even when looking at Year 8 overall, 81% of Year 8 Females are achieving a Criteria Level 3 or 4 with only 54% Year 8 Males achieving in this area. Male students are therefore a target area.

In 2010, students will be assessed in the Foods programme against the NZC Levels rather than the levels that have been used this year. These levels have been used however to determine the report level given on student reports.

Hard Materials

No group achieved as well as we would have liked. The reason for this I believe is students not being familiar with the type of activity they were involved in. The context last year was very different to this year meaning that the matter of prior knowledge was not applicable.

Pacific Students are the group that we need to target in 2010. Only 24% of these students in the school achieved a Level 3 or better.

Male Students also need to be a target area for us in 2010. Only 33% achieved a Level 3 or better compared to 51% of Females achieving here.

CONCLUSION

Technology is intended to be a practical learning programme and this suits most students very well. They are very positive about going to Technology. Students enjoy these learning programmes.

In Foods Technology our students are achieving to a reasonable standard. This is a popular learning programme. All students regardless of their ethnicity, enjoy eating! This is an area where all students have an equal opportunity to do well. Some ESOL students had extra programmes provided during the year to support their learning. This has been largely to help them understand the vocab words for different equipment and food, used in this area.

In Structures and Mechanisms, students overall had difficulty with the accuracy that was required during the planning process. Although the majority of students completed their models to a satisfactory standard, the changes made to these during the construction were not always included as modifications on their design plans.

Overall in the Technology area, further work on the design process would see an improvement in student achievement as well as improving the final products that students actually make.

Next year all staff in the Technology area will all be assessing using the new Curriculum. In 2010 all schools are expected to assess students against the achievement objectives in the strand, Technological Capability.

With the building of the new Technology Block and the modernizing of the Foods Room students will have a lovely area for learning.

Staff in the Technology area in 2010 will be using a revised form of reporting to parents. They will be, like in other learning areas, having interviews with parents throughout the year to discuss student learning progress and goals.

The next report to the Board will be In December 2010.

This report was compiled on December 4th 2009