



KS4 ASSESSMENT

DESIGN & TECHNOLOGY

BRAMHALL HIGH SCHOOL

Score		Knowledge and Understanding
<p style="font-size: 2em; font-weight: bold; text-align: center;">7/8/9</p> <p style="text-align: center;">Well above expected level for a Year 10 student</p> <p style="text-align: center;">(8 and 9 will only be awarded for exceptional performance)</p>	<p style="font-size: 2em; font-weight: bold;">A/A*</p>	<ul style="list-style-type: none"> • Relevant and detailed design possibilities identified and explored demonstrating wide breadth and depth of knowledge. • An investigation of the user/client, with a clear explanation of the majority of the client's needs and wants. • Detailed analysis of the work of others that subsequently informs ideas. • A general understanding of the impact on society including economic and social effects. • Aspects of investigation throughout, with ample justification and understanding. • Creative, imaginative ideas have been developed accurately, considering functionality, aesthetics and innovation. • Further developments made that take into account on-going research. • Experimentation and development work through a range of 2D/3D techniques (including CAD where appropriate). • Development of at least one model, that is mainly fit for purpose. • Appropriate materials/components selected with suitable research into their working properties. • Prototype(s) shows a high level of making/finishing skills that are appropriate, ensuring the majority of specified tolerances have been met. • Use of relevant tools, materials and equipment (including CAM where appropriate) that have been operated skilfully and safely. • Independently worked to produce a high quality prototype(s). • The use of Quality Control is evident ensuring the prototype(s) is accurate. • Evidence of all the stages of making with appropriate consideration to industrial practices

		<ul style="list-style-type: none"> • Design brief produced in response to one of the contextual challenges, with justified detail showing analysis and evaluation of their client’s needs and wants. • A design specification with justification linking to their own and others considerations, wants and interests. • A manufacturing specification covering all essential aspects, justified and linking to their prototype(s) to inform manufacture. • Evidence that most iterations are as a result of considerations linked to analysis and evaluation of the prototype(s). May reflect upon feedback received from third parties. • Most aspects of the prototype(s) have been tested against the design brief or specification (including some third party testing). With some reference to modifications throughout the project. • Good, continuous analysis and evaluation throughout.
<p style="text-align: center;">6</p> <p style="text-align: center;">Above expected level for a Year 10 student</p>	<p style="text-align: center;">B</p>	<ul style="list-style-type: none"> • Design possibilities identified and explored demonstrating aspects of depth and breadth of knowledge. • An investigation of the user/client, with some reference to the client’s needs and wants. • Some analysis of the work of others to inform ideas. • Limited aspects of understanding of the impact on society including economic and social effects have been investigated. • Some investigation throughout, with basic justification. • Imaginative ideas have been developed, considering functionality, aesthetics and innovation. • Further developments made take into account some on-going research. • Some experimentation and development work through a range of 2D/3D techniques (including CAD where appropriate). • Development of at least one model. • Materials/components selected with some research into their working properties.

		<ul style="list-style-type: none"> • Prototype(s) shows good level of making/finishing skills that are appropriate ensuring most tolerances have been met. • Tools, materials and equipment (including CAM where appropriate) have generally been operated correctly and safely. • Prototype(s) shows some evidence of quality of manufacture. • Quality Control is evident throughout the manufacture of the prototype(s) but isn't always appropriate. • Evidence of most stages of making with consideration of industrial practices. • Design brief produced in response to one of the contextual challenges, with detail showing some analysis and evaluation of their client's needs and wants. • A design specification with reasonable justifications. • A manufacturing specification with reasonable justifications linking to their prototype(s), but these may not always be accurate. • Some evidence that iterations are a result of sound consideration linked to analysis and evaluation of the prototype(s). Some reflection upon feedback received from third parties. • Some aspects of the prototype(s) have been tested against the design brief or specification. With some reference to modifications that are not always appropriate. • Some analysis and evaluation throughout.
<p style="text-align: center;">5</p> <p style="text-align: center;">Expected level for a Year 10 student</p>	<p style="text-align: center;">C</p>	<ul style="list-style-type: none"> • More than one design possibility identified, with limited depth/breadth of knowledge demonstrated. • Investigation into the user/client, with limited reference to the client's needs and wants at basic level. • Basic identification and description of the work of others to inform ideas. • Basic understanding of the impact on society based on economic or social effects. • Basic investigation evident throughout.

		<ul style="list-style-type: none"> • Design ideas have been developed with some reference to functionality, aesthetics and innovation. • Further developments made sometimes take into account basic on-going research. • Some basic experimentation and development work through a basic range of 2D/3D techniques (including CAD where appropriate). • Basic development of at least one model. • Some materials/components selected with basic research into their working properties. • Prototype(s) shows basic level of making/finishing skills that are not always appropriate with the main tolerances being achieved. • Tools, materials and equipment (including CAM where appropriate) have been operated correctly and safely but are not always appropriate and sometimes requiring guidance. • Prototype(s) of basic quality and manufactured with some guidance. • Inconsistent Quality Control is evident and is not always appropriate. • Basic evidence of the stages of making • Basic design brief produced in response to one of the contextual challenges, with limited analysis and evaluation of their client's needs and wants. • A basic design specification with some justification. • Basic manufacturing specification has been produced with some justification, links to their prototype(s), but lacks accuracy. • Alterations shown to be basic with little consideration of analysis and evaluation of the prototype(s). Limited reflection upon feedback received from third parties. • Aspects of the prototype(s) have been tested against the design brief or specification. With limited reference to modifications. • Basic analysis and evaluation throughout.
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Approaching the
expected level for a
Year 10 student

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- A single design possibility. • Single user/client stated.
- Identification of the work of others but not used to inform ideas or mainly irrelevant.
- Minimal understanding of the impact on society. • Limited investigation.
- Design ideas have been developed with limited or no reference to functionality, aesthetics and innovation.
- Further developments are made but limited.
- Development work is lacking in detail but a limited range of 2D/3D techniques (including CAD where appropriate).
- Limited development of one model.
- Limited consideration of the materials selected.
- Prototype(s) shows limited level of making/finishing skills that are not always appropriate. Tolerances have not been adhered to.
- Tools, materials and equipment (including CAM where appropriate) have been used but needed close supervision and guidance.
- Prototype(s) is of poor quality and/or was manufactured with extensive guidance.
- Evidence of Quality Control is minimal having little effect on the outcome. • Minimal evidence of the stages of making.
- Basic design brief produced in response to one of the contextual challenges, with limited analysis and evaluation of their client's needs and wants.
- A basic design specification with some justification.
- Basic manufacturing specification has been produced with some justification, links to their prototype(s), but lacks accuracy.
- Alterations shown to be basic with little consideration of analysis and evaluation of the prototype(s). Limited reflection upon feedback received from third parties.
- Aspects of the prototype(s) have been tested against the design brief or

		<p>specification. With limited reference to modifications.</p> <ul style="list-style-type: none"> • Basic analysis and evaluation throughout.
<p style="text-align: center;">3</p> <p>Working towards the expected level for a Year 10 student</p>	<p style="text-align: center;">E</p>	<ul style="list-style-type: none"> • A single design possibility. • Single user/client stated. • Identification of the work of others that is irrelevant to the task. • No understanding of the impact on society. • Limited investigation. • Design ideas have little development with no references made to task. • No further developments have been made. • Development work is lacking in detail with no application of 2D/3D drawing techniques or CAD. • Limited development of one model. • No consideration of the materials selected. • Prototype shows limited level of making/finishing skills that are not always appropriate. Tolerances have not been adhered to. • Tools, materials and equipment (including CAM where appropriate) have been used but needed close supervision and guidance. • Prototype is of poor quality and/or was manufactured with extensive guidance. • No evidence of Quality Control. • No evidence of the stages of making. • Basic design brief produced in response to one of the contextual challenges, with limited evaluation of their client's needs and wants. • A basic design specification. • Basic manufacturing specification has been produced but lacks accuracy. • Alterations shown to be basic or non-evident. • Prototype has been tested against the design brief or specification with limited reference to modifications. • Basic analysis and evaluation throughout.
<p style="text-align: center;">2</p>	<p style="text-align: center;">F</p>	<ul style="list-style-type: none"> • A guided single design possibility. • Single user/client mentioned with no details.

<p>Working towards the expected level for a Year 10 student</p>		<ul style="list-style-type: none"> • Limited identification of the work of others that is irrelevant to the task. • No understanding of the impact on society. • Minimal investigation. • Design ideas have no development and no references made to task. • Help required when selecting appropriate materials as no consideration has been made. • Prototype was made under strict guidance with help. • Tools, materials and equipment (no consideration of the use of CAM where appropriate) have been used but needed one to ne help to achieve an outcome. • Prototype is of poor quality and incomplete. • No evidence of Quality Control. • No evidence of the stages of making. • Basic design brief produced in response to one of the contextual challenges, with no evaluation of their client’s needs and wants. • A basic design specification. • Basic manufacturing specification has been produced that has no links to ideas. • Alterations are not shown. • Prototype has not been tested against the design brief or specification. • Minimal analysis and evaluation throughout.
<p>1</p> <p>Working towards the expected level for a Year 10 student</p>	<p>G</p>	<ul style="list-style-type: none"> • Nothing worthy of credit.

Score		Knowledge and Understanding
<p style="font-size: 2em; font-weight: bold; text-align: center;">7/8/9</p> <p style="text-align: center;">Well above expected level for a Year 11 student</p> <p style="text-align: center;">(8 and 9 will only be awarded for exceptional performance)</p>	<p style="font-size: 2em; font-weight: bold;">A/A*</p>	<ul style="list-style-type: none"> • High level of relevant well detailed design possibilities identified and explored demonstrating considerable depth and breadth of knowledge. • A concise investigation of the user/client, with a clear explanation of all aspects of the client's needs and wants. • Relevant and comprehensive investigation of the work of others that clearly informs ideas. • Relevant design focus and clear understanding of the impact on society including economic and social effects. • Continuous investigation throughout with excellent justification and understanding. • Creative, imaginative and innovative ideas have been developed, with a high level of accuracy and consistency, considering functionality, aesthetics and innovation. • Further developments have been made that take into account on-going research that is both relevant and focused. • Extensive experimentation and development work is evident, using a wide range of 2D/3D techniques (including CAD where appropriate). • High level development using a variety of modelling methods that ensures the prototype fully meets its purpose. • Appropriate materials/components selected with extensive research into their working properties and availability. • Prototype(s) shows exceptionally high level of making/finishing skills that are consistent and appropriate, ensuring all specified tolerances have been met. • Relevant tools, materials and equipment (including CAM where appropriate) that have been consistently operated at an exceptionally high level, both skilfully and safely.

		<ul style="list-style-type: none"> • Worked independently to produce an exceptionally high quality prototype(s) with the potential to be commercially viable. • A high level of Quality Control is evident to ensure the prototype(s) is accurate using very close tolerances. • Detailed evidence of the stages of making with consideration to industrial skills and processes. • A detailed design brief produced in response to one of the contextual challenges, with consistently justified detail showing full analysis and evaluation of their client's needs and wants and beyond. • Detailed design specification with very high level of justification linking to their own and others' considerations, wants and interests. • Detailed manufacturing specification with very high level of justification linking to their prototype(s) to inform manufacture. • Strong evidence that various iterations are as a result of considerations linked to analysis and evaluation of the prototype(s), including feedback received from third parties and testing. • All aspects of the prototype(s) have been tested against the design brief and specification (including third party testing) with clear reference to any modifications undertaken or proposed throughout their project. • Excellent, continuous analysis and evaluation throughout with excellent justification and understanding.
<p style="text-align: center;">6</p> <p style="text-align: center;">Above expected level for a Year 11 student</p>	<p style="text-align: center;">B</p>	<ul style="list-style-type: none"> • Relevant and detailed design possibilities identified and explored demonstrating wide breadth and depth of knowledge. • An investigation of the user/client, with a clear explanation of the majority of the client's needs and wants. • Detailed analysis of the work of others that subsequently informs ideas.

		<ul style="list-style-type: none"> • A general understanding of the impact on society including economic and social effects. • Aspects of investigation throughout, with ample justification and understanding. • Creative, imaginative ideas have been developed accurately, considering functionality, aesthetics and innovation. • Further developments made that take into account on-going research. • Experimentation and development work through a range of 2D/3D techniques (including CAD where appropriate). • Development of at least one model, that is mainly fit for purpose. • Appropriate materials/components selected with suitable research into their working properties. • Prototype(s) shows a high level of making/finishing skills that are appropriate, ensuring the majority of specified tolerances have been met. • Use of relevant tools, materials and equipment (including CAM where appropriate) that have been operated skilfully and safely. • Independently worked to produce a high quality prototype(s). • The use of Quality Control is evident ensuring the prototype(s) is accurate. • Evidence of all the stages of making with appropriate consideration to industrial practices. • Design brief produced in response to one of the contextual challenges, with justified detail showing analysis and evaluation of their client's needs and wants. • A design specification with justification linking to their own and others considerations, wants and interests. • A manufacturing specification covering all essential aspects, justified and linking to their prototype(s) to inform manufacture. • Evidence that most iterations are as a result of considerations linked to analysis and
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		<p>evaluation of the prototype(s). May reflect upon feedback received from third parties.</p> <ul style="list-style-type: none"> • Most aspects of the prototype(s) have been tested against the design brief or specification (including some third party testing). With some reference to modifications throughout the project. • Good, continuous analysis and evaluation throughout
<p>5</p> <p>Expected level for a Year 11 student</p>	<p>C</p>	<ul style="list-style-type: none"> • Design possibilities identified and explored demonstrating aspects of depth and breadth of knowledge. • An investigation of the user/client, with some reference to the client's needs and wants. • Some analysis of the work of others to inform ideas. • Limited aspects of understanding of the impact on society including economic and social effects have been investigated. • Some investigation throughout, with basic justification. • Imaginative ideas have been developed, considering functionality, aesthetics and innovation. • Further developments made take into account some on-going research. • Some experimentation and development work through a range of 2D/3D techniques (including CAD where appropriate). • Development of at least one model. • Materials/components selected with some research into their working properties. • Prototype(s) shows good level of making/finishing skills that are appropriate ensuring most tolerances have been met. • Tools, materials and equipment (including CAM where appropriate) have generally been operated correctly and safely. • Prototype(s) shows some evidence of quality of manufacture. • Quality Control is evident throughout the manufacture of the prototype(s) but isn't always appropriate.

		<ul style="list-style-type: none"> • Evidence of most stages of making with consideration of industrial practices. • Design brief produced in response to one of the contextual challenges, with detail showing some analysis and evaluation of their client's needs and wants. • A design specification with reasonable justifications. • A manufacturing specification with reasonable justifications linking to their prototype(s), but these may not always be accurate. • Some evidence that iterations are a result of sound consideration linked to analysis and evaluation of the prototype(s). Some reflection upon feedback received from third parties. • Some aspects of the prototype(s) have been tested against the design brief or specification. With some reference to modifications that are not always appropriate. • Some analysis and evaluation throughout
<p style="text-align: center;">4</p> <p style="text-align: center;">Approaching the expected level for a Year 11 student</p>	<p>D</p>	<ul style="list-style-type: none"> • More than one design possibility identified, with limited depth/breadth of knowledge demonstrated. • Investigation into the user/client, with limited reference to the client's needs and wants at basic level. • Basic identification and description of the work of others to inform ideas. • Basic understanding of the impact on society based on economic or social effects. • Basic investigation evident throughout. • Design ideas have been developed with some reference to functionality, aesthetics and innovation. • Further developments made sometimes take into account basic on-going research. • Some basic experimentation and development work through a basic range of 2D/3D techniques (including CAD where appropriate). • Basic development of at least one model.

		<ul style="list-style-type: none"> • Some materials/components selected with basic research into their working properties. • Prototype(s) shows basic level of making/finishing skills that are not always appropriate with the main tolerances being achieved. • Tools, materials and equipment (including CAM where appropriate) have been operated correctly and safely but are not always appropriate and sometimes requiring guidance. • Prototype(s) of basic quality and manufactured with some guidance. • Inconsistent Quality Control is evident and is not always appropriate. • Basic evidence of the stages of making. • Basic design brief produced in response to one of the contextual challenges, with limited analysis and evaluation of their client's needs and wants. • A basic design specification with some justification. • Basic manufacturing specification has been produced with some justification, links to their prototype(s), but lacks accuracy. • Alterations shown to be basic with little consideration of analysis and evaluation of the prototype(s). Limited reflection upon feedback received from third parties. • Aspects of the prototype(s) have been tested against the design brief or specification. With limited reference to modifications. • Basic analysis and evaluation throughout
<p style="text-align: center;">3</p> <p>Working towards the expected level for a Year 11 student</p>	<p style="text-align: center;">E</p>	<ul style="list-style-type: none"> • A single design possibility. • Single user/client stated. • Identification of the work of others but not used to inform ideas or mainly irrelevant. • Minimal understanding of the impact on society. • Limited investigation. • Design ideas have been developed with limited or no reference to functionality, aesthetics and innovation. • Further developments are made but limited.

		<ul style="list-style-type: none"> • Development work is lacking in detail but a limited range of 2D/3D techniques (including CAD where appropriate). • Limited development of one model. • Limited consideration of the materials selected. • Prototype(s) shows limited level of making/finishing skills that are not always appropriate. Tolerances have not been adhered to. • Tools, materials and equipment (including CAM where appropriate) have been used but needed close supervision and guidance. • Prototype(s) is of poor quality and/or was manufactured with extensive guidance. • Evidence of Quality Control is minimal having little effect on the outcome. • Minimal evidence of the stages of making. • Basic design brief produced in response to one of the contextual challenges, with limited analysis and evaluation of their client's needs and wants. • A basic design specification with some justification. • Basic manufacturing specification has been produced with some justification, links to their prototype(s), but lacks accuracy. • Alterations shown to be basic with little consideration of analysis and evaluation of the prototype(s). Limited reflection upon feedback received from third parties. • Aspects of the prototype(s) have been tested against the design brief or specification. With limited reference to modifications. • Basic analysis and evaluation throughout.
<p style="text-align: center;">2</p> <p>Working towards the expected level for a Year 11 student</p>	<p>F</p>	<ul style="list-style-type: none"> • A single design possibility. • Single user/client stated. • Identification of the work of others that is irrelevant to the task. • No understanding of the impact on society. • Limited investigation. • Design ideas have little development with no references made to task. • No further developments have been made.

		<ul style="list-style-type: none"> • Development work is lacking in detail with no application of 2D/3D drawing techniques or CAD. • Limited development of one model. • No consideration of the materials selected. • Prototype shows limited level of making/finishing skills that are not always appropriate. Tolerances have not been adhered to. • Tools, materials and equipment (including CAM where appropriate) have been used but needed close supervision and guidance. • Prototype is of poor quality and/or was manufactured with extensive guidance. • No evidence of Quality Control. • No evidence of the stages of making. • Basic design brief produced in response to one of the contextual challenges, with limited evaluation of their client’s needs and wants. • A basic design specification. • Basic manufacturing specification has been produced but lacks accuracy. • Alterations shown to be basic or non-evident. • Prototype has been tested against the design brief or specification with limited reference to modifications. • Basic analysis and evaluation throughout.
<p style="text-align: center;">1</p> <p>Working towards the expected level for a Year 11 student</p>	<p style="text-align: center;">G</p>	<ul style="list-style-type: none"> • Nothing worthy of credit.