



NEW CASTLE COUNTY VOCATIONAL TECHNICAL SCHOOL DISTRICT

# Production and Imaging Technology

## LOCATION

Delcastle Technical High School

Instructor: Ms. Susan Wells

Paraeducator:

Ms. Bonnie Spear

Career Program Review:

2008



NEW CASTLE COUNTY VOCATIONAL TECHNICAL  
SCHOOL DISTRICT

1417 Newport Road  
Wilmington, DE 19804

Phone: 302-995-8000  
Fax: 302-995-8038

Email: [deborah.zych@nccvt.k12.de.us](mailto:deborah.zych@nccvt.k12.de.us)

**The Production and Imaging Technologies** career program at Delcastle Technical High School offers students who receive special education services an opportunity to learn and to apply principles of employability skills and customer service through the use of technology and computer assisted equipment. Students engage in learning experiences in a school-based production center that focuses on customized imaging products. This very hands-on and active program trains students to use embroidery, framing, engraving, copying and badge-making equipment. The program provides a challenging and satisfying experience for the students as they complete a variety of daily work orders requested by Delcastle and District staff.

## **Preferred Personal Attributes and Skills**

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*To do this kind of work, students should have these interests and aptitudes:*

- Interest in working
- Ability to use independent judgment
- Average or better physical strength and dexterity
- Color and touch discrimination
- Hand-eye coordination
- Ability to work independently
- Ability to initiate conversation with others and customers
- Ability to concentrate on detailed work for long periods
- Basic math and basic mechanical skills

## **Average Earnings/Career Opportunities**

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Starting minimum wage up to \$20/hr and beyond for experienced management positions

- Food Service Industry
- Retail Industry
- Customer Service
- Management/Supervisory
- Warehousing
- Office/Clerical
- Embroidering
- Framing
- Laundry/Cleaners
- Kinko's/Staples/Printers
- Graphics – engraving, trophy shop

## **Production and Imaging Technologies Learning Targets**

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*These are the major tasks students will be expected to demonstrate:*

### **A. Copying**

- 1.0 Processing Orders for Copies.
  - 1.1 Students will locate appropriate materials for job order.
  - 1.2 Students will identify terms commonly used in information processing.
  - 1.3 Students will check inventory of supplies for job order.
    - 1.3a Students will identify components of an efficiently organized workstation
    - 1.3b Stapler
    - 1.3c Paper clip
    - 1.3d Inbox
    - 1.3e Outbox
    - 1.3f Message holder
  - 1.4 Students will order new supplies needed for inventory.
  - 1.5 Students will communicate details of job correctly with client.
  
- 2.0 Demonstrating Appropriate Techniques When Using the Telephone.
  - 2.1 Students will locate telephone numbers and addresses.
  - 2.2 Students will demonstrate proper techniques for placing calls.
  - 2.3 Students will demonstrate proper techniques for taking a message.
  - 2.4 Students will demonstrate proper techniques for placing a caller on hold.
  
- 3.0 Using copiers efficiently.
  - 3.1 Students will identify warning labels of copy equipment.
  - 3.2 Students will use copy machinery according to safety instructions.
  - 3.3 Students will use stapling machinery according to safety instructions.
  - 3.4 Students will use binding machinery according to safety instructions.
  - 3.5 Students will use hole punch equipment according to safety instructions.
  - 3.6 Students will use laminating equipment according to safety instructions.
  
- 4.0 Design and Layout a Copy Product
  - 4.1 Students will identify and use printers' measurements for work.
  - 4.2 Students will identify proper font(s) and print size for work order.
  - 4.3 Student will prepare a rough layout of the work request.
  
- 5.0 Producing the Copy Order
  - 5.1 Students will demonstrate accurate set-up of copy equipment for work order.
  - 5.2 Students will run copy orders.
  - 5.3 Students will perform required cutting of product.

- 5.4 Students will attach labels to documents.
  - 5.5 Students will staple multi-page documents in correct order.
  - 5.6 Students will perform counting tasks related to copy order.
  - 5.7 Students will collate copy orders.
  - 5.8 Students will deliver copy order in a timely and appropriate manner.
  - 5.9 Students will demonstrate proficiency in filling out a bill form for a copy order.
- 6.0 Using Files Appropriately for the Management of Records/Information
- 6.1 Students will display types of filing supplies.
  - 6.2 Students will demonstrate types of filing procedures.
  - 6.3 Students will use types of filing systems.
  - 6.4 Students will file office information appropriately.
    - 6.4a Students will file information alphabetically/alphabetize copy orders.
    - 6.4b Students will file information numerically.
    - 6.4c Students will file information chronologically.
  - 6.5 Students will retrieve information from files.

## **B. Computerized Badge Assembly**

- 1.0 Accessing Required Data from a Database
- 1.1 Students will identify the hardware components of the computer.
  - 1.2 Students will describe the concept of connecting to a network.
  - 1.3 Students will demonstrate an understanding of common vocabulary terms.
  - 1.4 Students will identify the characteristics of an efficiently organized workplace.
  - 1.5 Students will save data to desired location on the hard drive.
  - 1.6 Students will save data to alternate drive (floppy or zip).
  - 1.7 Students will access data from various drives (hard, floppy, or zip).
  - 1.8 Students will insert clipart and photographs into a document.
- 2.0 Using Technology in Graphic Design
- 2.1 Students will identify and use page measurements.
  - 2.2 Students will demonstrate the appropriate use of type fonts, styles, and sizes.
  - 2.3 Students will demonstrate knowledge of basic design principles such as balance, margins, use of color.
  - 2.4 Students will activate design tools; text box, hollow shapes, solid shapes, barcode font, logos, photos, double-sided arrows.
  - 2.5 Students will resize and align components of card design.
  - 2.6 Students will place static text in text boxes.
  - 2.7 Students will select correct data for each field in a design template.

- 3.0 Using and Identifying Database Programs
  - 3.1 Students will select/activate areas of a database table (fields, row, column).
  - 3.2 Students will enter data into elected fields.
  - 3.3 Students will search the database for a specific record using various fields.
  
- 4.0 Operating and Maintaining a Card Printer
  - 4.1 Students will identify basic parts of a card printer.
  - 4.2 Students will demonstrate ability to load cards into card hopper.
  - 4.3 Students will remove a used ribbon from a printer.
  - 4.4 Students will install a new ribbon into a printer.
  - 4.5 Students will perform routine cleaning and maintenance services on card printers.
  - 4.6 Students will repair a broken ribbon.
  - 4.7 Students will clear a card jam.
  - 4.8 Students will turn printer on and off.
  - 4.9 Students will abort print job.
  - 4.10 Students will reprint a card.
  
- 5.0 Demonstrating Ability to Use System to Take a Badge Photo
  - 5.1 Students will correctly place camera into tripod.
  - 5.2 Students will adjust height and level of tripod.
  - 5.3 Students will activate the camera by selecting the correct icon.
  - 5.4 Students will adjust the amount of zoom from wide angle to telephoto.
  - 5.5 Students will tell client where to look and when to smile.
  - 5.6 Students will operate the “take a picture” and/or “try again” buttons on screen.
  - 5.7 Students will transfer the image for enhancement.
  - 5.8 Students will activate the crop box.
  - 5.9 Students will center the image inside of the box.
  - 5.10 Student will use the right mouse button to shrink or stretch the box as needed.
  - 5.11 Students will crop the picture.
  - 5.12 Students will select the best quality lighting exposure for the finished photo.
  
- 6.0 Punching Holes in Badges and/or Papers with Consistent Placement
  - 6.1 Students will insert the correct edge of the material to be punched into the puncher.
  - 6.2 Students will use the guide to adjust placement of the hole punch.
  - 6.3 Students will depress lever to punch hole through the material.

**C. Laser Engraving**

- 1.0 Demonstrating Understanding of Safety Principles
  - 1.1 Students will identify and use proper safety procedures.
    - 1.1a Students will cut material.
    - 1.1b Students will bevel.
    - 1.1c Students will use sharps.
    - 1.1d Students will handle brass material.
    - 1.1e Students will clean materials.
  - 1.2 Students will demonstrate the ability to keep a clean, orderly, safe work area.
  - 1.3 Students will maintain and use etching equipment in a safe manner.
    - 1.3a Students will use Wizzard XL engraving machine.
    - 1.3b Students will use a button cutter.
    - 1.3c Students will use a button assembly machine.
    - 1.3d Students will use a plastic cutter.
    - 1.3e Students will use a brass cutter.
  
- 2.0 Demonstrating Ability to Plan Effectively
  - 2.1 Students will identify stock and perform basic inventory skills.
  - 2.2 Students will schedule incoming graphics orders.
  - 2.3 Students will purchase graphic supplies.
  - 2.4 Students will identify basic design principles.
  - 2.5 Students will identify ruler measurements to 1/8 of an inch.
  - 2.6 Students will calculate basic plastic/brass cuts.
  - 2.7 Students will make accurate cuts using a plastic/brass cutter.
  
- 3.0 Designing and Making an Engraved Image
  - 3.1 Students will identify desktop publishing equipment.
  - 3.2 Students will distinguish between work processing/page layout and graphics software.
  - 3.3 Students will prepare text and copy and utilize proper file management techniques.
  - 3.4 Students will prepare layout according to job specifications.
    - 3.4a Students will calculate and place measurement of piece into matching grid.
    - 3.4b Students will demonstrate proper placement of piece to be engraved.
    - 3.4c. Students will enlarge and decrease size of type.
    - 3.4d Students will demonstrate the ability to increase and decrease the baseline.
    - 3.4e Students will identify margins and increase/decrease.
    - 3.4f Students will demonstrate the ability to execute "auto buyout".
  - 3.5 Students will demonstrate operation of cutters.

- 3.6 Students will place cutter in spindle.
- 4.0 Evaluating a Finished Product for Quality, then Packing and Processing it for Dissemination
  - 4.1 Students will evaluate engraved quality and make needed adjustments to improve the printed piece.
  - 4.2 Students will prepare surfaces for assembly.
    - 4.2a Students will prepare surface with tape
    - 4.2b Students will clean surface
    - 4.2c Student will measure the surface
  - 4.3 Students will measure to drill and make holes.
  - 4.4 Students will assemble piece for finished product.
  - 4.5 Students will count graphic items engraved to complete order.
  - 4.6 Students will package product order.
  - 4.7 Students will prepare a job invoice.
    - 4.7a Students will compute the total cost of materials.
    - 4.7b Students will calculate total time on the job.
  - 4.8 Students will present customer with an invoice.
  - 4.9 Students will evaluate customer satisfaction.

#### **D. Framing**

- 1.0 Demonstrating an Understanding of Safety Procedures
  - 1.1 Students will identify and use proper safety procedures.
    - 1.1a Students will replace blades.
    - 1.1b Students will handle glass-cutting tools.
  - 1.2 Students will follow proper safety procedures when operating equipment, and follow approved shop procedures.
    - 1.2a Students will wear safety goggles when appropriate.
    - 1.2b Students will dispose of glass appropriately.
  - 1.3 Students will locate and execute worksheets.
  - 1.4 Students will follow instructions on warning labels.
  - 1.5 Students will demonstrate the ability to keep a clean, orderly, safe work area.
- 2.0 Demonstrating an Understanding of Machinery and Computer Operation
  - 2.1 Students will demonstrate safe work habits, basic parts systems and operational procedures of cutters and computerized system.
  - 2.2 Students will recognize cleaning solutions, adhesives, and finishing products.
  - 2.3 students will prepare math sketch and layout for framed piece.
  - 2.4 Students will distinguish ruler measurement to a/16 of an inch.
  - 2.5 Students will utilize software designed for cutting of mats.

- 2.6 Students will produce a finished mat according to specifics on order form/worksheets.
- 2.7 Students will gather appropriate elements for specific frame job.
- 3.0 Demonstrating the Ability to Finish a Product
  - 3.1 Students will follow directions to specific frame order.
  - 3.2 Students will assemble artwork and matt.
  - 3.3 Students will gather frame needed.
    - 3.3a Students will stain or re-finish desired frame.
    - 3.3b Student will assemble frame.
  - 3.4 Students will clean glass.
  - 3.5 Students will assemble glass, artwork and frame.
  - 3.6 Students will demonstrate use of framing point gun.
  - 3.7 Students will demonstrate proper use of double-sided tape gun
  - 3.8 Students will apply backing correctly.
  - 3.9 Students will cut backing to appropriate size.
  - 3.10 Students will choose proper hanging system.
  - 3.11 Students will demonstrate acceptable wrapping/packaging of artwork.
  - 3.12 Students will prepare invoice from framing worksheet.

#### **E. Laundry Services**

- 1.0 Performing safe working practices.
- 2.0 Identifying cleaning supplies and their use.
- 3.0 Operating washing machine.
  - 3.1 Students will load articles appropriately.
  - 3.2 Students will use correct amount of detergent.
  - 3.3 Students will set controls appropriately.
  - 3.4 Students will log in the time, date, material and customer name.
- 4.0 Learning to Operate the Dryer
  - 4.1 Students will load articles appropriately.
  - 4.2 Students will set controls needed.
  - 4.3 Students will log in time for tracking purposes.
- 5.0 Folding, Packaging, and Delivery of Laundry
  - 5.1 Students will fold laundry load correctly.
  - 5.2 Students will package laundry appropriately for delivery.
  - 5.3 Students will deliver laundry to correct location.

**F. Computerized Embroidery**

- 1.0 Accessing Required Data from Embroidery Software Program.
  - 1.1 Students will demonstrate an understanding of common vocabulary terms.
  - 1.2 Students will save data to desired location.
  - 1.3 Students will access data from various drives.
  - 1.4 Students will insert graphics and fonts to customer specifications.
  
- 2.0 Hooping and Preparing for Embroidery
  - 2.1 Students will identify stock and perform basic inventory skills.
  - 2.2 Students will ruler measurements to 1/4 inch.
  - 2.3 Students will choose correct backing needed.
  - 2.4 Students will hoop garment in correct position.
  - 2.5 Students will place hoped garment on appropriate embroidery machine.
  
- 3.0 Engaging Embroidery Sequences
  - 3.1 Students will locate and turn on machine.
  - 3.2 Students will engage beginning sequence to embroider.
  - 3.3 Students will retrieve desired design from a compact flash card.
  - 3.4 Students will determine specific thread colors needed.
  - 3.5 Students will designate specific color thread to appropriate sewing needle.
  - 3.6 Students will complete a hoop trace of design.
  - 3.7 Students will engage sequence to embroider.
  - 3.8 Students will demonstrate appropriate cutting of backing once embroidered.
  
- 4.0 Maintaining and Troubleshooting Embroidery Machine
  - 4.1 Students will thread needle from point of origin to sewing needle head.
  - 4.2 Students will oil machine weekly.
  - 4.3 Students will thread bobbin.
  - 4.4 Students will clean bobbin track when needed.

**G. Employability Skills**

- 1.0 Demonstrating Basic Work Expectations
  - 1.1 Students will report to assigned work area at the beginning of the training session.
  - 1.2 Students will use a time clock and sign-in sheet correctly.
  - 1.3 Students will read and follow a work schedule.
  - 1.4 Students will wear or carry personal identification for the career area.

- 1.5 Students will demonstrate good teamwork skills in the work environment.
  - 1.6 Students will respond to changes in directions/routines.
  - 1.7 Students will respond/act upon corrective feedback.
  - 1.8 Students will identify/conform to social expectations of the workplace.
  - 1.9 Students will follow one-step directions.
- 2.0 Time Management
- 2.1 Students will explain the meaning of “being on time”.
  - 2.2 Students will know the shop’s policy on breaks.
  - 2.3 Students will know the shop’s attendance policy.
  - 2.4 Students will know the shop’s tardiness policy.
  - 2.5 Students will know handbook policies regarding sickness and emergencies.
  - 2.6 Students will explain the importance of time management to meeting deadlines in school, work, and personal life.
- 3.0 Self Evaluation and Monitoring
- 3.1 Students will evaluate work performance/quality of one’s work.
  - 3.2 Students will engage in problem solving.
  - 3.3 Students will apply basic academic skills in the work setting.
  - 3.4 Students will follow established rules and procedures.
  - 3.5 Students will transition from one task to another.
- 4.0 Demonstrate Responsibility for One’s Self and Environment Needed for Success in the Workplace
- 4.1 Students will locate/prepare/organize workspace.
  - 4.2 Students will accept/utilize/maintain task-related clothing, equipment or safety/hygiene routines.
  - 4.3 Students will demonstrate promptness during work/school environment.
  - 4.4 Students will follow established rules and procedures.
  - 4.5 Students will respond to/follow emergency procedures.
  - 4.6 Students will use correct social conventions when interacting with co-workers, customers, and supervisors.
  - 4.7 Students will greet customers in a friendly and professional manner.
  - 4.8 Students will use non-verbal communication such as eye contact, body position, and voice tone effectively.
- 5.0 Demonstrate Skills Required to Apply for a Job
- 5.1 Students will complete a job application accurately, printed in ink.
  - 5.2 Students will key a résumé summarizing experience, education, and job training.
  - 5.3 Students will complete appropriate working papers form.

- 5.4 Students will participate in mock interview sessions.
  - 5.5 Students will obtain and complete school co-op papers.
  - 5.6 Students will articulate 2 or 3 of their ultimate career goals.
  - 5.7 Students will convey personal strengths and abilities they possess.
- 6.0 Communicate Effectively in a Professional Work Environment
- 6.1 Students will follow oral and written instructions.
  - 6.2 Students will identify good listening skills.
  - 6.3 Students will repeat back information.
  - 6.4 Students will ask for clarification about confusing information.
  - 6.5 Students will outline and deliver a short oral presentation on appropriate workplace language.
  - 6.6 Students will interpret nonverbal communication.
  - 6.7 Students will identify behaviors considered to be appropriate or inappropriate in a job interview.
  - 6.8 Given examples, students will distinguish between acceptable topics and those that could be objectionable in the workplace.
- 7.0 Personal Grooming – Hygiene
- 7.1 Students will identify what areas of his/her person constitute hygiene (i.e. hair, teeth, breath, skin, etc.)
  - 7.2 Students will list personal hygiene aides that people should use daily.
  - 7.3 Students will distinguish between appropriate and inappropriate hairstyles, body piercing, tattoos, etc. for various jobs.
  - 7.4 Students will explain consequences of improper hygiene in the workplace.
  - 7.5 Students will list ways to keep clothing neat, wrinkle-free and well maintained.
  - 7.6 Students will explain the visual benefits of well-fitting, well-maintained clothes.
  - 7.7 Students will explain the workplace consequences of failing to care for your clothing.
- 8.0 Customer Service
- 8.1 Students will carefully listen to and correctly identify customer complaints.
  - 8.2 Students will explain how customer satisfaction leads to repeat business.
  - 8.3 Students will know the proper “chain of command” to follow when problems arise in the workplace.
  - 8.4 Students will explain how a friendly personality makes a positive first impression, and why it is necessary for the workplace.

**H. Workplace Health, Safety and Security-Federal Regulations Protecting Employees**

- 1.0 Students will know for what the acronym OSHA stands.
- 2.0 Students will define the purpose of OSHA.
- 3.0 Students will know their rights under OSHA.
- 4.0 Students will know for what acronym ADA (Americans with Disabilities Act) stands.
- 5.0 Given a list of possibilities, students will identify what conditions are covered under ADA.
- 6.0 Students will define sexual harassment and know his/her rights under the law in the workplace.

**I. Workplace Health, Safety and Security—Workplace Theft, Internal and External**

- 1.0 Students will know the difference between internal theft and external theft.
- 2.0 Students will know what they should do when encountering both types of theft.
- 3.0 Students will know the consequences of failing to report both types of theft.
- 4.0 Students will know the consequences of personally being involved in theft or shoplifting in the workplace.

**J. Workplace Health, Safety and Security—Reiterate Safety Policy From Student Handbook**

- 1.0 Students will know the similarities that exist between classroom and workplace safety.
- 2.0 Students will compare and contrast consequences that result in the failure to comply with safety expectations in both the workplace and classroom.
- 3.0 Students will know to whom to report safety hazards.
- 4.0 Students will use proper lifting techniques to lift objects.

## Appendix

Career Advisory Committee

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Career Program Data

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Course of Study

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# PRODUCTION AND IMAGING TECHNOLOGY

Delcastle Technical High School

## Grade 9

MATH (M)		ENGLISH (ELA)	
3140 Math Concepts	1	2210 English	1
3150 Math Applications	1	2110 English	1
3170 Algebra	1	_____	_____
3710 Algebra	1	_____	_____
3300 Integrated Math 1	1	_____	_____
3400 Integrated Math 2	1	_____	_____
3500 Integrated Math 3	1	_____	_____

SCIENCE (S)		SOCIAL STUDIES (SS)	
4200 Physical Science	1	5200 Global Studies	1
4110 Physical Science	1	5110 Global Studies	1
_____	_____	_____	_____

### VOCATIONAL and OTHER COURSES

1910 T. C. Exploration	2	_____	_____
_____	_____	_____	_____

## Grade 10

MATH (M)		ENGLISH (ELA)	
3150 Math Applications	1	2220 English	1
3170 Algebra	1	2120 English	1
3300 Integrated Math 1	1	_____	_____
3400 Integrated Math 2	1	_____	_____
3500 Integrated Math 3	1	_____	_____

SCIENCE (S)		SOCIAL STUDIES (SS)	
4300 Biology	1	5300 Civics/Economics	1
4120 Biology	1	5120 Civics/Economics	1
_____	_____	_____	_____

### VOCATIONAL and OTHER COURSES

(3 VOCATIONAL CREDITS ARE REQUIRED.)

_____	_____	Driver Education	_____
_____	_____	_____	_____
_____	P.E. / Health	_____	Spanish I or II 1

Note: The grade in which Health and Physical Education are offered varies from school to school.

## Grade 11

MATH (M)		ENGLISH (ELA)	
3170 Algebra	1	2230 English	1
3400 Integrated Math 2	1	2130 English	1
3500 Integrated Math 3	1	2235 Honors English	1
3750 Intermediate Algebra	1	_____	_____
3820 Stat/Algebra	1	_____	_____

SCIENCE (S)		SOCIAL STUDIES (SS)	
4400 Integrated Science	1	5400 U.S. History	1
4170 Integrated Science	1	5130 U.S. History	1
4500 Chemistry*	1	_____	_____
4600 Physics*	1	_____	_____

### VOCATIONAL and OTHER COURSES

(3 VOCATIONAL CREDITS ARE REQUIRED.)

_____	_____	_____	_____
_____	P.E. / Health	_____	Spanish I or II 1

(PR) Denotes a program requirement

\* Denotes prerequisites must be met in order to enroll.

### Graduation Requirements:

Total = 24.5/26.5

Vocational = 9/10 credits

ELA = 4 credits

M = 3/4 credits

SS = 3/4 credits, to include U.S. History

S = 3/4 credits, to include Biology & a physical science

Health = 0.5 credits

Phys. Ed. = 1.0

credits

## Grade 12

MATH (M)		ENGLISH (ELA)	
3310 Integrated Math I CT	1	2240 English	1
3500 Integrated Math 3	1	2140 English	1
3750 Intermediate Algebra	1	2245 Honors English	1
3820 Stat/Algebra	1	2245 Co-op English	1
3950 Pre Calculus A	1	_____	_____
3960 Pre Calculus B	1	_____	_____
_____	9 Co-op	_____	1

SCIENCE (S)		SOCIAL STUDIES (SS)	
4500 Chemistry*	1	5500 World History*	1
4600 Physics*	1	5600 Cont. Citizenship	1
4700 Environmental Sci.*	1	5910 Law & Order	0.5
4130 Environmental Sci.*	1	5810 Intro. to Sociology	0.5
_____	_____	5920 Intro. to Psychology	0.5
_____	9 Co-op	_____	9 Co-op

### VOCATIONAL and OTHER COURSES

(3 VOCATIONAL CREDITS ARE REQUIRED.)

_____	_____	_____	_____
_____	P.E. / Health	_____	Spanish I or II 1

# **N C C V T School District**

## **Board of Education**

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### **District MISSION STATEMENT**

*The New Castle County Vocational-Technical School District is dedicated to the development of competent, caring and productive students for a diverse and changing society through high standards, quality teaching, instructional technology, and community partnerships.*

9/4/09



